



Sequoia Voting Systems

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SEQUOIA VOTING SYSTEMS OPTECH INSIGHT

STATE OF CALIFORNIA PROCEDURES

DOCUMENT VERSION 1.01

MARCH 2005

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Optech Insight State of California Procedures

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These Procedures establish the regulations governing the use of the Optech Insight in the election phases of testing, precinct and Absentee voting, semi-official and official canvass, and Post-Election requirements.

These procedures have been adopted by the Secretary of State pursuant to the California Elections Code and shall regulate and govern the use of the Optech Insight at all elections governed by the California Elections Code.

These procedures shall be effective March 2005 and shall be used in conjunction with all other statutory and regulatory requirements. Should there be a conflict with current or future provisions of the California Elections Code, such provisions shall take precedence. Insofar as feasible, all procedures prescribed herein shall be carried out in full view of the public.

These procedures constitute a minimum standard of performance. They are not intended to preclude additional steps being taken by individual Election Officials to enhance the security and reliability of the electoral process.

The Secretary of State reserves the right to amend these procedures at any time.

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DOCUMENT VERSION HISTORY

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February 2005	J. Bolen	Initial Document	1.00
March 2005	J. Bolen	Added paragraphs 3.3.3 – 3.3.7: “Procedure for Absentee Ballots,” “Procedure for Provisional Ballots,” “Procedure for Non-Optech Insight Ballots,” and “Return of Voted Ballots to Election Official.” Added paragraph 5.9.2: “Distribution of Election Returns Tape. Updated sub-chapter 7.2 (“Individual Access Privileges”) to be 7.2.2 (“Passwords”), added 1 sentence, and added paragraph 7.2.1 (“Controlled Access”). Added paragraphs 7.4.1 – 7.4.2: “General Equipment and Data Security” and “Physical Security.” Deleted second occurrence of sub-chapter C.2: “Blank Ballot.” Added appendix C.3 (“Unvoted Major Office Ballot (Option)”), and added references to “Unvoted Major Office Ballot” throughout the document.	1.01

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1 The Optech Insight

This chapter defines the following general information for the Optech Insight:

- Purpose of This Document
- Document Structure
- Optech Insight Overview
- Configurations and Operating Modes
- System Components
- Subsystems
- General System Specifications

1.1 PURPOSE OF THIS DOCUMENT

This document is the State of California Procedures for the Optech Insight.

1.2 DOCUMENT STRUCTURE

Chapter 1 – The Optech Insight: Defines the general information for the Optech Insight.

Chapter 2 – Pre-Election Procedures: Defines the Pre-Election Procedures for the Optech Insight.

Chapter 3 – Election Day Procedures: Defines the Election Day Procedures for the Optech Insight, including Opening the Polls, Official Election, and Closing the Polls.

Chapter 4 – Post-Election Procedures: Defines the Post-Election Procedures for the Optech Insight.

Chapter 5 – System Management and Security: Defines the System Management and Security for the Optech Insight.

Chapter 6 – Certification and Reporting Requirements: Defines the Certification and Reporting Requirements for the Optech Insight.

Chapter 7 – System Security: Defines the System Security for the Optech Insight.

Appendix A – Glossary: Provides a listing and brief definition of all terms for the Optech Insight that may be unfamiliar to persons not trained in either voting systems or computer operation.

Appendix B – Voting Variations: Defines the Voting Variations for the Optech Insight.

Appendix C – Ballot Disposition: Defines the Ballot Disposition requirements and processes for the Optech Insight.

Appendix D – Pre-Election LAT: Defines the Pre-Election LAT requirements and processes for the Optech Insight.

Appendix E – Forms: Provides samples of the forms described in this document.

1.3 OPTECH INSIGHT OVERVIEW



Figure 1-1: Optech Insight Overview

The Optech Insight, manufactured by Sequoia Voting Systems (SVS), is a portable Precinct Count System that uses Optical Scan Read-Head technology to electronically read and tabulate Optical Scan ballots at the Polling Place. The Optech Insight complements SVS's Optech 400-C Central Count System, as a versatile and Voter-friendly ballot tabulator.

The Optech Insight is classified by the Federal Election Commission as a Marksense Voting System used to cast and tabulate ballots. It allows Local Officials to conduct efficient, timely elections, and performs the following functions on the votes recorded on ballots, which are inserted by the Voter:

- **Record Votes:** Optically reads the marks made on the ballots.
- **Tabulate Ballot:** Tabulates ballots as they are cast, allowing the results of the election to be readily available when closing the Polls.
- **Print Results:** Produces Precinct Totals.
- **Store Precinct Totals:** Stores the Precinct Totals in the removable MemoryPack, for easy transfer to the Central Counting Location, after closing the Polls.

Dimensions:Ballot Box Dimensions when assembled and ready for use:

- Height: 38"
- Width: 24"
- Length: 32"

The Optech Insight Dimensions are:

- Height: 7.75"
- Width: 19"
- Length: 23"

System Dimensions of Optech Insight and Ballot Box:

- Height: 38"
- Width: 24"
- Length: 32"

1.4 CONFIGURATIONS AND OPERATING MODES

The Optech Insight comprises the following configurations and operating modes:

- Initialization
- Testing
- Opening the Polls
- Official Election
- Closing the Polls
- Accumulation
- Post-Election Audit

1.4.1 INITIALIZATION

For each election, new Election Parameter data must be loaded into the MemoryPack. When the Optech Insight is powered on a number of validity checks are made including the verification of the checksum for the Election Parameter data. When the Election Parameter data is new, then the old checksum will not match. The APX program informs the operator that the Election Parameter data and checksum do not match and requires that the MemoryPack be initialized before processing may proceed. All counters are set to zero, all options set to their default value, and all checksums recalculated. The Electronic Log is cleared and reset to include only the date and time of initialization (Initialization may also be requested at any time through the Keypad after entering the Access Code.)

1.4.2 TESTING

After initialization has been completed, testing is performed to verify the new Election Parameter data and the Optech Insight hardware. Test ballots are read that have been prepared to generate predictable and verifiable results. The optimum criteria are a unique number of votes for every candidate in each office. In practice, offices with large numbers of candidates may be given a predictable pattern of votes like “1, 2, 3, 4, 1, 2, 3, 4, 1, 2”. Test ballots also include a selection of error and exception ballots such as:

- Torn ballots
- Ballots with incorrect Security ID Header Codes
- Blank Ballots
- Overvoted Ballots
- Etc.

Totals Reports are then printed and reviewed, per the *Optech Insight Operators Manual*. This process may be repeated until all testing requirements are satisfied.

At the end of the testing process vote totals are set to zero clearing the test ballot results and enabling official ballot reading. Note that the Electronic Log is not cleared, which means that the testing actions are still part of the Electronic Log. The Optech Insight is then powered off, locked, sealed, and prepared for shipment to the appropriate precinct. The following message is normally left in the printer mechanism as a record that the test results were indeed cleared to zero.

O.K.
VOTE TOTALS ARE ZERO

3:15:55 PM, FRIDAY, OCTOBER 25, 2000
PRECINCT 0123
CURRENT BALLOTS CAST = 0
POLLS OPEN, O.K. TO READ BALLOTS

1.4.3 OPENING THE POLLS

After the testing process has been completed, polls are opened by powering ON the Optech Insight. After verifying the checksums, the Optech Insight automatically prints a full vote totals report showing zero totals for all candidates and zero ballots cast followed by the ‘ready to read ballots’ message.

5:56:32 AM, TUESDAY, NOVEMBER 7, 2000
PRECINCT 0123
CURRENT BALLOTS CAST = 0
POLLS OPEN, O.K. TO READ BALLOTS

1.4.4 OFFICIAL ELECTION

After Opening the Polls, official Ballot Tabulation begins.

- **Rear Bin:** Regular Ballots are completely tabulated and sent to the Rear Bin. The Public Counter is incremented by one.
- **Center Bin:** Write-In Ballots are sent to the Center Bin. The Public Counter is incremented by one.
- **Return to Voter:** The following ballots may be returned to Voter, and may then be pulled out for review or replacement, or may be overridden using the **[3]** Override Error Ballot key and processed appropriately and stacked in the appropriate Ballot Bin:
 - o Blank Ballot
 - o Unvoted Major Office Ballot (option)
 - o Overvoted Ballot
 - o Cross-Voted Ballot
 - o Error Ballot
 - o Unprocessable Ballot
- **Auxiliary Bin:** If a power failure occurs and power is subsequently restored, then a process similar to Opening the Polls occurs. The Auxiliary Bin may also be used to hold exception/error ballots for review after Closing the Polls.
- After verifying the checksums, the Optech Insight automatically prints the Power ON Report, per the *Optech Insight Operators Manual*.
- But if one or more ballots have been cast, the Power ON Report is not printed. The message 'O.K. to read ballots' is printed and Ballot Tabulation then continues exactly as if the power failure had not occurred.

If an Optech Insight unit fails because of a hardware problem and a new unit is installed in the precinct, the MemoryPack can be moved from the old to the new unit and processing will continue in exactly the same manner as in the power failure procedure described above.

1.4.5 CLOSING THE POLLS

After all of the ballots have been processed; polls are closed by the Poll Worker. The cover to the Keypad section is unlocked and opened, and the **[Print Totals]** key is pressed, which generates this message.

8:05:01 PM, 11/07/00
REQUEST TO CLOSE THE POLLS
(PRINT TOTALS, NO MORE BALLOTS)

PRESS 0 KEY IF THIS IS O.K., 9 IF NOT

After confirming the action by pressing the **[0]** yes key, the polls are closed and the messages 'polls are now closed' and 'no more ballot reading' are printed followed by the full ballot statistical and vote totals reports. You may print additional copies of the vote totals reports by pressing **[Print Totals]** again.

1.4.6 ACCUMULATION

After all reports are printed, the Optech Insight is powered off and the MemoryPack is unsealed and removed and transported to the Central Counting Location where the contents of the MemoryPack are read and accumulated.

1.4.7 POST-ELECTION AUDIT

At any time after the results have been read and accumulated, the MemoryPack may be placed in any Optech Insight and:

- Additional Totals Reports may be printed.
- The Electronic Log Report may be printed, which includes a date and time stamped log entry for all significant events that have occurred since initialization.
- The MemoryPacks may be read and accumulated again into a different PC to verify that the Election Night accumulation was proper.

1.5 SYSTEM COMPONENTS

This sub-chapter defines the following System Components for the Optech Insight:

- Ballots
- Marking Devices
- Ballot Tabulator
- Ballot Box
- MemoryPack
- Ballot Guide Bar & Keys
- Printer and Paper Tape
- Optional 12 VDC Battery Backup

1.5.1 BALLOTS

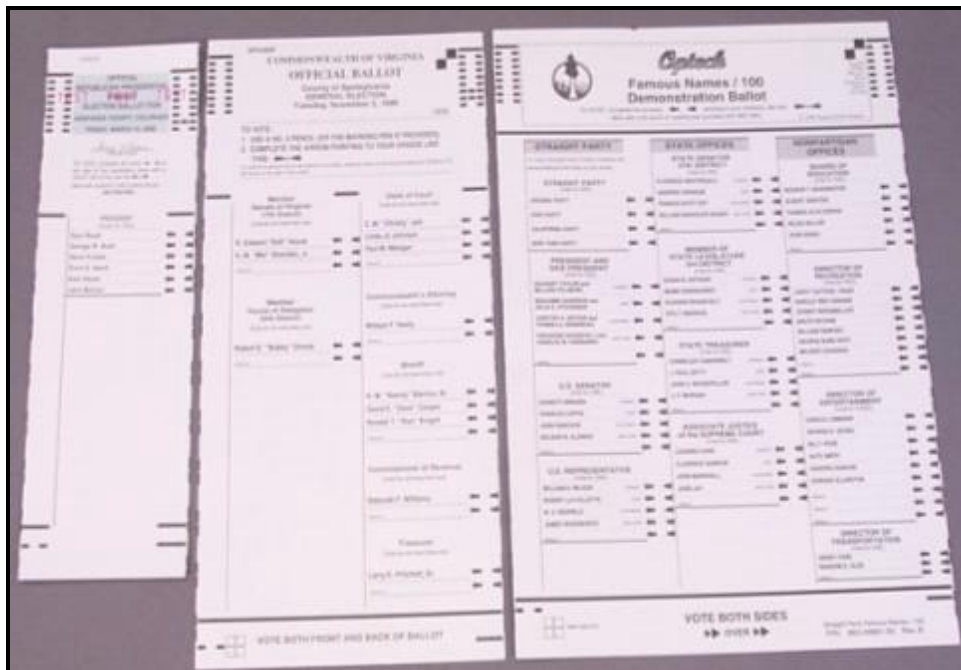


Figure 1-2: Ballot: 1, 2, and 3 Columns

The Optech Insight can be adjusted to read and tabulate ballots of the following three widths, per the above figure:

- **1 Column:** 3.690 inches
- **2 Columns:** 6.720 inches
- **3 Columns:** 9.750 inches

Ballot lengths may vary from 14 to 22 inches.

All ballots are controlled by the Secretary of State, pursuant to California Administrative Regulations, and shall be printed with distinctive tints and designs as specified by the Secretary of State, and shall be produced and distributed in accordance with regulations adopted by the Secretary of State.

Please see the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*.

1.5.2 MARKING DEVICES

The Optech Insight requires the use of a special felt-tip pen, SVS Part Number 960-28096-00, or a soft lead pencil (#2 or softer). Many pens and pencils will read correctly while others have compositions that are highly reflective or transparent to colors and may not read. Non-approved Marking Devices should be tested before their use in an election.

1.5.3 BALLOT TABULATOR

Front View of the Ballot Tabulator

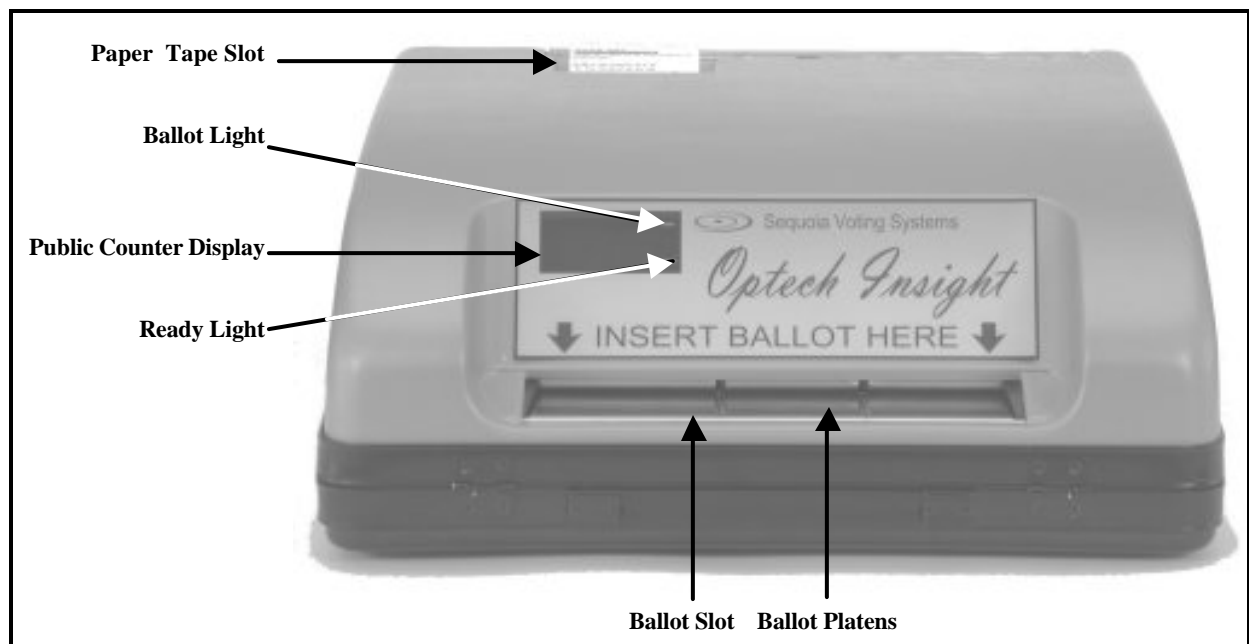


Figure 1-3: Ballot Tabulator (Front View)

Paper Tape Slot: Used to print out the Paper Tape, for reports, per the *Optech Insight Operators Manual*.

Ballot Light: Indicates that the Optech Insight is ready to accept ballots.

NOTE: If this green light is not on, the Optech Insight will not accept ballots.

Public Counter Display: Starts at zero and displays the count of all ballots fed into the Optech Insight and sent to the Rear and Center Bins. It does not include ballots returned to Voter, that were pulled out of the Ballot Slot. The Public Counter Display should read 0000 when Opening the Polls.

Ready Light: Indicates that the Optech Insight is plugged into a live AC outlet.

Ballot Slot: Slot where the Voter feeds the ballot into the Optech Insight.

Ballot Platens: Set by the Maintenance Technician to accommodate the width of ballots for the election.

Rear View of the Ballot Tabulator

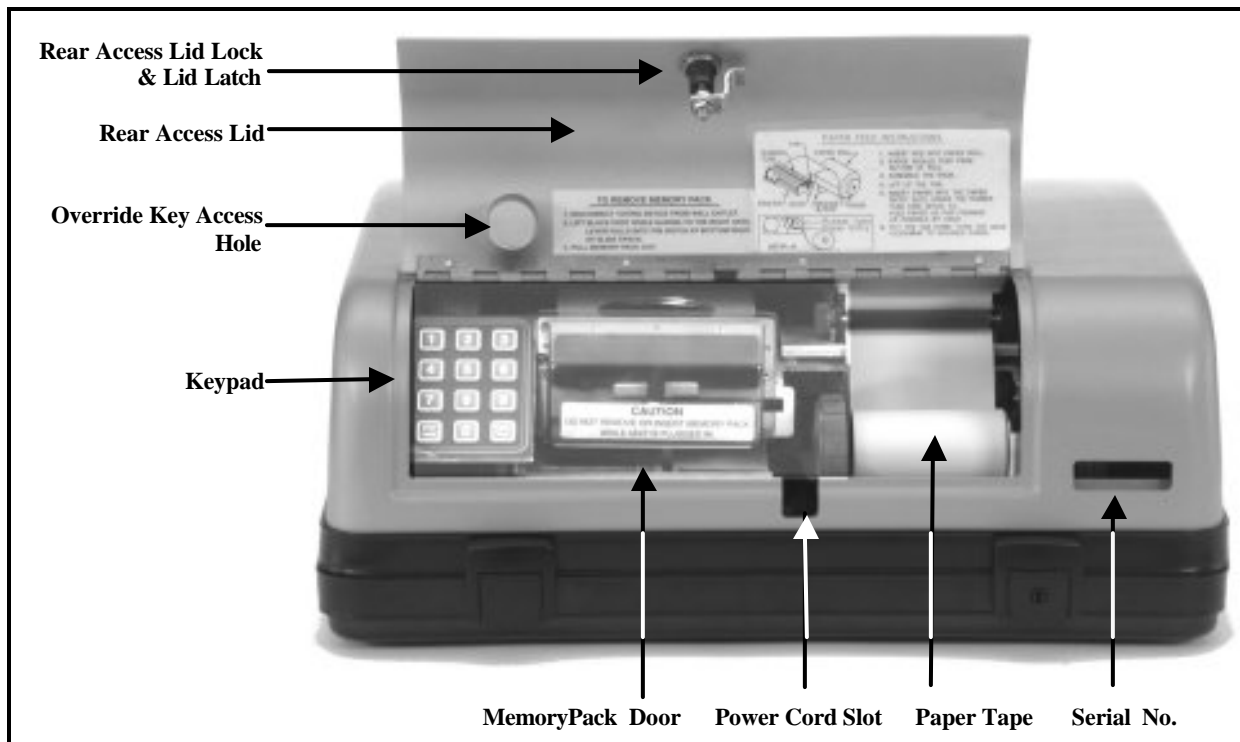


Figure 1-4: Ballot Tabulator (Rear View)

Rear Access Lid Lock & Lid Latch: Provides you with access to the Power Cord, MemoryPack, Keypad, Paper Tape, and other internal components. When locked, it also prevents unauthorized access to the MemoryPack, Keypad, Paper Tape, and other internal components.

Rear Access Lid: Provides you with access to the Power Cord, MemoryPack, Keypad, Paper Tape, and other internal components.

Override Key Access Hole: Provides you with access to the [3] Override Error Ballot key without unlocking the Rear Access Lid.

Keypad: Enables you to perform the various election functions on the Optech Insight.

MemoryPack Door: Houses the MemoryPack.

Power Cord Slot: Slot where you will plug in the Optech Insight.

Paper Tape: Used to print all election data.

Serial No.: Identifies the unit. This number should be the same as the number on the Voting Device and Electronic Log Reports, per the *Optech Insight Operators Manual*.

1.5.4 *BALLOT BOX*

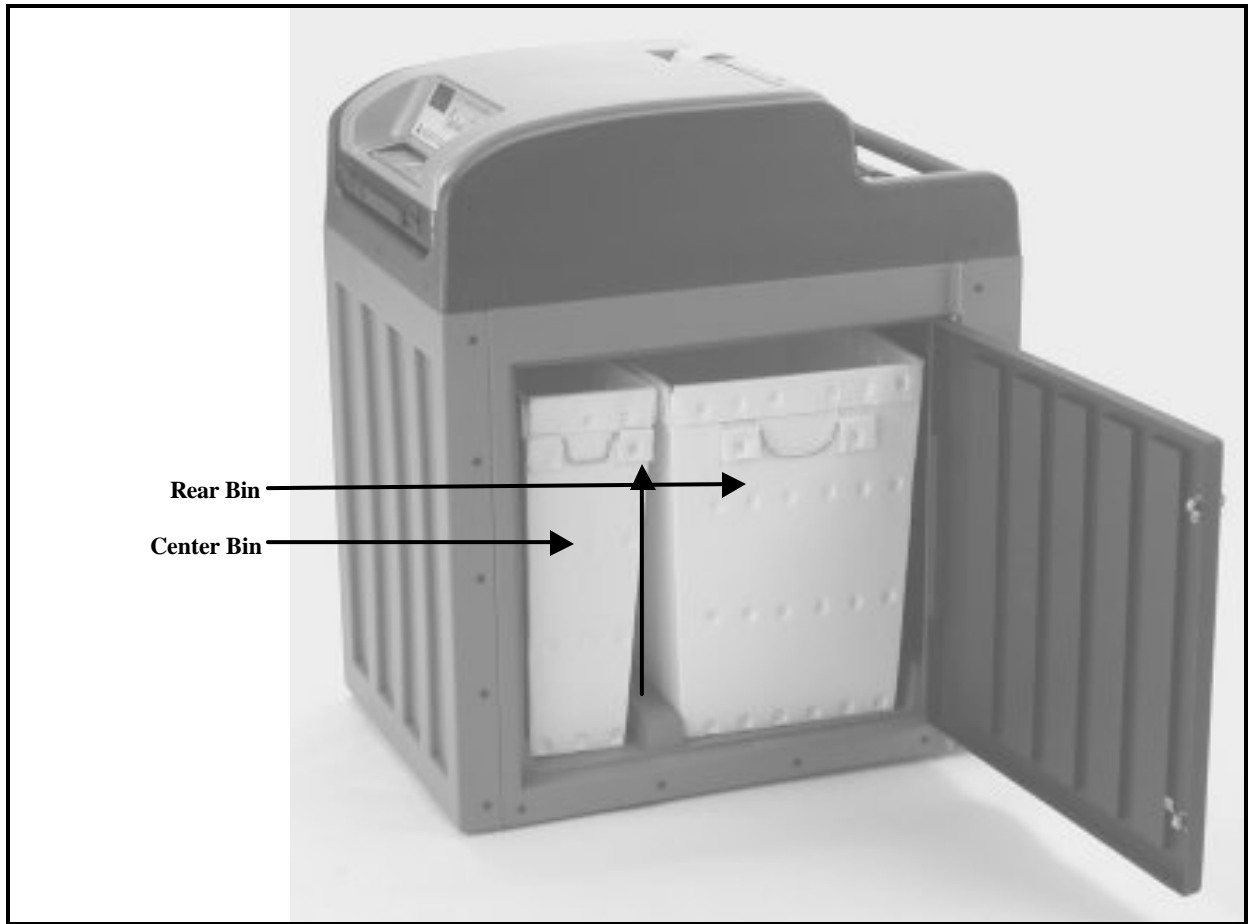


Figure 1-5: Ballot Box: Rear & Center Bins

Rear Bin: Usually contains the larger quantity of ballots that have been completely tabulated and require no further action.

Center Bin: Holds all processed ballots that have one or more offices with a Write-In position voted. Write-In Ballots are automatically segregated.



Figure 1-6: Ballot Box: Auxiliary Bin

Auxiliary Bin: If for any reason the Optech Insight becomes inoperable during the polling hours and will no longer accept ballots, ballots will be put into this Ballot Bin for later processing. The Auxiliary Bin may also be used to hold exception/error ballots for review after Closing the Polls.

NOTE: Exception Ballots are processed according to the options defined in the Election Parameter data, per the *EMS Operators Manual*.

The following ballots may be returned to Voter, and may then be pulled out for review or replacement, or may be overridden using the [3] Override Error Ballot key and processed appropriately and stacked in the appropriate Ballot Bin:

- Blank Ballot
- Unvoted Major Office Ballot (option)
- Overvoted Ballot
- Undervoted Ballot
- Cross-Voted Ballot
- Error Ballot
- Unprocessable Ballot

1.5.5 MEMORYPACK



Figure 1-7: MemoryPack

A removable MemoryPack containing the following information is located at the rear of the Ballot Tabulator:

- Election Parameter data
- Precinct Totals

The Optech Insight uses the Election Parameter data programmed into the MemoryPack, using the EMS election coding system, to obtain Precinct Totals, during the election.

The MemoryPack may be removed at the end of the election and transported to the Central Counting Location for rapid transfer of Precinct Totals to the Central Counting Location for inclusion into the canvass reports, by the AERO accumulation system.

Anti-Static Padded Bags are provided, by SVS, as packing material for MemoryPacks. These bags, or bags of similar construction and materials, shall be used to cover MemoryPacks during transportation whenever possible.

1.5.6 BALLOT GUIDE BAR & KEYS

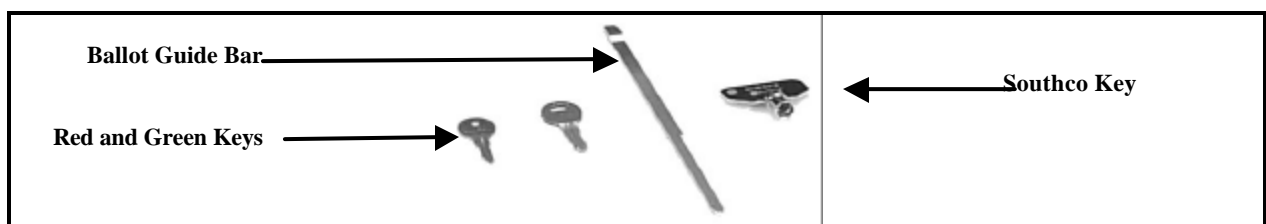


Figure 1-8: Ballot Guide Bar & Keys

Ballot Guide Bar: Inserted by you, to adjust the Optech Insight to accept 1- or 2-column ballots. Not used for 3-column ballots.

Southco Key: Locks/unlocks the Rear Access Lid.

Red Key: Opens the Rear Access Lid.

Green Key: Locks/unlocks the Ballot Box.

1.5.7 PRINTER AND PAPER TAPE

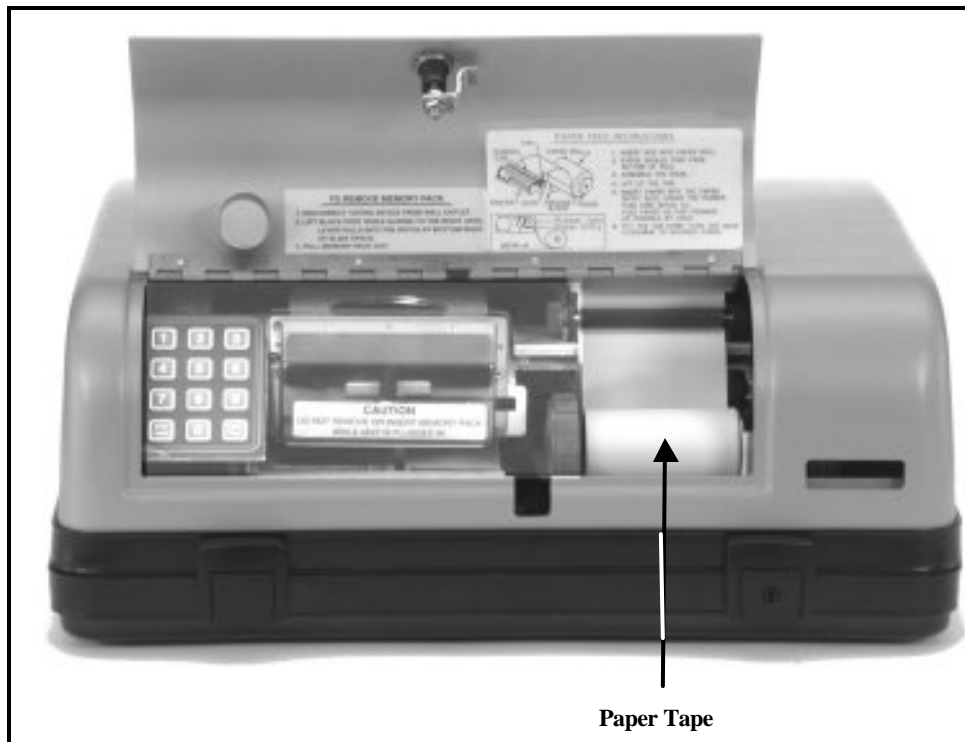


Figure 1-9: Location of Paper Tape

Printer:

The Optech Insight uses a thermal printer that can print on either single - or two-part thermal paper, and is capable of printing at the rate of up to 15 lines per minute.

The printer is used to print the following reports, per the *Optech Insight Operators Manual*:

Verification Reports: Printed when powering ON the Optech Insight (for Pre-Election LAT or Opening the Polls). Include the System Start-Up Report, Zero Ballot Report, Allowable Header Codes Report, and Zero Vote Totals Report.

Diagnostic Routines: Printed when performing Diagnostic Tests, per the *Optech Insight Maintenance Manual*.

Electronic Log Report: Usually printed when Closing the Polls.

Totals Reports: Printed when Closing the Polls. Include the Results Ballot Report and Results Vote Totals Report.

Other: Where applicable, includes Access OK Messages, Special Time Verification Messages, and Power ON Report (After Power Failure), per *Chapter 5: System Management and Security*.

Paper Tape:

The Paper Tape width, diameter, stock quality, and thickness are as follows:

MATERIAL REQUIREMENTS FOR PAPER TAPE	
Width	80 ± 1 mm
Diameter	55 mm maximum
Approved Paper	
Fujitsu	FTP031P0060-45
Oji Paper	PD1604, PD1704, PD150R
Nippon Paper	TF50KS-E4, TF60KS-E, TF50KS-E
Mitsubishi Paper	P220VBB-1, AFP-235

Any Paper Tape meeting the above specification may be used.

1.5.8 OPTIONAL 12 VDC BACKUP BATTERY

The optional 12 VDC Backup Battery, SVS Part No. 460-31038-00, plugs into the Ballot Tabulator, and allows for continuation of Ballot Tabulation in case of a power failure, for up to 16 hours.

The Optech Insight may be connected in such a way that allows a 12 VDC Backup Battery to be connected also. When the voltage drops below that of the 12 VDC Backup Battery, the 12 VDC Backup Battery automatically is used to provide power.

NOTE: Cable 46030139-00 is required to connect the optional 12 VDC Backup Battery to the Optech Insight.

1.6 SUBSYSTEMS

This sub-chapter defines the following Subsystems for the Optech Insight:

- Ballot Definition Subsystem
- Control Subsystem
- Vote Recording Subsystem
- Conversion Subsystem
- Processing Subsystem
- Reporting Subsystem
- Vote Data Management Subsystem

1.6.1 BALLOT DEFINITION SUBSYSTEM

The Optech Insight contains all required general-purpose election logic and capabilities. However, it does not in itself have any knowledge of the specific election that is being processed. This information is obtained via the Election Parameter data passed from the EMS election coding system via the MemoryPack, per the *Optech Insight Software Specification*.

The Ballot Definition Subsystem comprises the following functionality, which is discussed in the next paragraphs:

- Databases
- Ballot Generation
- Election Programming
- Ballot Printing
- Ballot Validation

1.6.1.1 DATABASES

The following databases are used, per the *Optech Insight Software Specification*:

- Administrative Database
- Candidate and Context Database
- Voter Registration Database

1.6.1.2 BALLOT GENERATION

The Optech Insight does not provide this function. The EMS election coding system is designed to facilitate rapid, error-free definition of elections and their associated Ballot Layouts.

The EMS coding system is capable of handling at least 500 potentially active voting positions per Ballot Style, arranged to identify the following:

- Party affiliations in primary elections
- Offices and their associated labels and instructions
- Candidate names and their associated labels
- Issues or measures and their associated text

In addition, the EMS coding system incorporates provisions for the following Voting Variations, per *Appendix B: Voting Variations*:

- Open Primary
- Partisan Offices
- Non-Partisan Offices
- Write-In
- Rotation
- Split Precinct
- Vote For
- Recall Voting
- Cumulative Voting
- Provisional Voting

For Ballot specifications, please see the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*.

1.6.1.3 ELECTION PROGRAMMING

The Optech Insight does not provide this function. The EMS election coding system provides the following functionality:

- Provides the facility for the logical definition of the ballot
- Includes the definition of the number of allowable choices for each office and contest, and for the selection of various voting options in which a single selection causes a vote to be cast for more than one candidate or in more than one office.

Also, there is provision for the logical definition of political and administrative subdivisions where the list of candidates or contests may vary among Polling Places.

Separate ballot formats are generated when the activation or exclusion of any portion of the ballot, upon which the entitlement of a Voter to vote may vary by reason of place of residence or other such administrative or geographical criteria, is required.

1.6.1.4 BALLOT PRINTING

The Optech Insight does not provide this function. The EMS coding system creates final output in the form of a hard copy of each ballot format to assist in proofing/typesetting/printing of ballots, per the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*.

In addition, the EMS coding system helps provide ballot allocation of space and type fonts to ensure that each of the following are uniform to ensure that no active voting position is perceived by the Voter to be preferred to any other:

- Office
- Candidate
- Contest

1.6.1.5 BALLOT VALIDATION

The EMS election coding system generates and executes automated test procedures to validate the following:

- Correctness of Election Parameter data for each Ballot and Polling Place
- Correspondence of the ballot with the Ballot Definition.

The EMS coding system provides a control report, which shows any problems encountered during Ballot Validation. A new Ballot Type and size or adjustments in the order of a ballot can be made to correct problems.

The EMS coding system provides a text-based Ballot Style layout report, which shows the appropriate layout of each column for every Ballot Style, and includes all of the Header Codes used to differentiate Ballot Styles and precinct numbers. The date and time the ballot is generated shows on the printout to allow for audit checks that ensure proper ballots are in use.

The Optech Insight provides a Ballot Image Test selection within the Diagnostic Routines, which allows the Optech Insight to read a test ballot and then print out all active clock positions found on the ballot plus all header information. This report can then be verified with the text-based Ballot Style layout report generated, by the EMS coding system, during Ballot Generation, for proper reading and accuracy.

NOTE: Test data is segregated from actual voting data procedurally by use of the hardware/software features contained in the Optech Insight.

1.6.2 CONTROL SUBSYSTEM

This paragraph discusses the following operations that prepare and enable the Optech Insight to function as a Precinct Count System:

- Diagnostic Routines and System Start-Up Testing
- Tests at the Polling Place
- Opening the Polls
- Enabling a Ballot
- Closing the Polls
- Polling Place Reports

1.6.2.1 DIAGNOSTIC ROUTINES AND SYSTEM START-UP TESTING

Diagnostic Routines are normally executed at start-up automatically by the system, per the *Optech Insight Maintenance Manual*.

Further testing is initiated by pressing a single key or combination of keys, per the *Optech Insight Maintenance Manual*.

Simulation of the actual election is the most viable indicator of actual system performance in any election system. Reading test ballots demonstrates that all the following components are working:

- Optical Read-Heads
- Optical path sensors
- Ballot path systems

Test ballots are pre-marked for a known result in each office/measure and the results are observed and verified for correct totals. Test data is segregated from actual voting data procedurally by use of the hardware/software features contained in the operating system.

1.6.2.2 TESTS AT THE POLLING PLACE

The Optech Insight performs an automatic power-on self-test to check out system functions then initiates a checksum test to insure that all election programming is intact and that vote totals have not changed. The following version codes and dates are printed on the System Start-Up Report:

- APX (Application PROM Software)
- HPX (Hardware PROM Software)

The date and time the election was created are printed on the System Start-Up Report to allow an audit check of the correct program version date.

The current date and time prints to start the continuing Electronic Log Report.

The Allowable Header Codes Report is printed, to show which ballot may be read.

The Zero Vote Totals Report is printed, to allow the following to be matched to the ballots and the Electronic Log Report:

- Offices
- Candidates
- Precinct Number
- Precinct Name

For the above reports, please see the *Optech Insight Operators Manual*.

1.6.2.3 OPENING THE POLLS

When power is applied to the Optech Insight at the Polling Place, the following four reports are automatically generated, per the *Optech Insight Operators Manual*:

- **System Start-Up Report:** Provides the following data:
 - Identifies the system components.
 - Prints the current date and time.
 - Verifies that all checksums are OK.
 - Prints the Serial Number and Protective Counter Number of the Optech Insight unit.
 - Prints the title of the election together with the date and time of the creation of the EMS database used to create the Election Parameter data in the MemoryPack.
- **Zero Ballot Report:** Shows that the registers for the following ballot counts are set to zero:
 - **Counted**
 - **Not Counted**
 - **Total Ballots Cast**
- **Allowable Header Codes Report:** Indicates the ballot security identification codes for which the MemoryPack has been programmed.
- **Zero Vote Totals Report:** Contains a header that identifies the election, followed by a report of the data in every active location showing that it is set to zero.

The bottom of the Zero Vote Totals Report contains a signature block that must be signed by the Election Official.

The Optech Insight then automatically places itself open and ready to accept ballots.

1.6.2.4 ENABLING A BALLOT

Ballot Tabulation begins when Opening the Polls, which occurs automatically when power is applied.

1.6.2.5 CLOSING THE POLLS

After Closing the Polls (by unlocking and opening the Rear Access Lid with the Southco and Red keys, and pressing the [**Print Totals**] key), the Optech Insight prompts the Poll Worker to do one of the following two functions:

- Confirm the closing of the polls.
- Continue voting.

An acknowledgement is required before the Closing the Polls function is activated. No more ballots may be read after Closing the Polls, and the Optech Insight has a security lockout program that prevents a return to operation.

1.6.2.6 POLLING PLACE REPORTS

Upon Closing the Polls, the Optech Insight automatically prints the following reports, per the *Optech Insight Operators Manual*:

- **Results Ballot Report:** Part of Closing the Polls, and provides the following ballot counts, for the Ballot Bins:
 - **Counted**
 - **Not Counted**
 - **Total Ballots Cast**
- **Results Vote Totals Report:** Contains a header that identifies the election, followed by a report of the data in every active location showing the results.

At the bottom of the report is a signature block that must be signed by the Election Official.

Additional copies of the Results Vote Totals Report may also be obtained.

1.6.3 VOTE RECORDING SUBSYSTEM

The Vote Recording Subsystem consists of the equipment necessary to record Voter choices. This consists of the following system components, per the following paragraphs:

- 1.5.1: *Ballots*
- 1.5.2: *Marking Devices*
- 1.5.3: *Ballot Tabulator*
- 1.5.4: *Ballot Box*

1.6.4 CONVERSION SUBSYSTEM

The Conversion Subsystem contains all of the mechanical, electromechanical, and electronic devices required to read the ballot and translate its patterns of marks into electronic signals for later processing, as follows:

- Ballot Handling
- Ballot Disposition

The main functions of this subsystem are to handle and read the ballots.

1.6.4.1 BALLOT HANDLING

Ballots can be inserted into the Optech Insight in any of four length-wise orientations. Upon entry, a Throat Detector signals the processor to start the drive motor and the ballot is then engaged by a set of drive rollers. An audio/visual confirmation of the ballots acceptance by the Optech Insight is also provided.

Ballot Handling consists of the following devices:

- Ballot Platen adjustment for the width of the ballot
- Ballot Edge Guide
- Ballot Entrance Detector Station
- Drive Train

1.6.4.2 BALLOT DISPOSITION

A path sensor, located near the Read-Heads, checks the progress of the ballot. When the Read-Head path sensor detects the trailing edge of the ballot, the motor is dynamically braked to a stop, retaining the ballot inside the system.

While stopped, The Optech Insight makes the determination on the disposition of the ballot, to route ballots to the following three locations:

- Rear Bin
- Center Bin
- Return to Voter

NOTE: Ballot Disposition is determined by the jurisdiction at the time of Election Coding, by using the EMS election coding system.

For more details on Ballot Disposition, please see *Appendix C: Ballot Disposition*.

1.6.5 PROCESSING SUBSYSTEM

The Processing Subsystem contains all mechanical, electromechanical, electronic devices, and software required to perform the logical and numerical functions to perform the following operations:

- Interpret the electronic image of the voted ballot.
- Assign votes to the proper memory registers.

Please see the *Optech Insight Hardware Specification*.

1.6.6 REPORTING SUBSYSTEM

The Reporting Subsystem contains all mechanical, electromechanical, and electronic devices required to print the following reports, per the *Optech Insight Operators Manual*:

- **Verification Reports:** Printed when powering ON the Optech Insight (for Pre-Election LAT or Opening the Polls):
 - o System Start-Up Report
 - o Zero Ballot Report
 - o Allowable Header Codes Report
 - o Zero Vote Totals Report
- **Diagnostic Routines:** Printed when performing Diagnostic Tests, per the *Optech Insight Maintenance Manual*.
- **Electronic Log Report:** Usually printed when Closing the Polls.
- **Totals Reports:** Printed when Closing the Polls:
 - o Results Ballot Report
 - o Results Vote Totals Report
- **Other:** Printed as applicable, per *Chapter 5: System Management and Security*:
 - o Access OK Messages
 - o Special Time Verification Messages
 - o Power ON Report (After Power Failure)

1.6.7 VOTE DATA MANAGEMENT SUBSYSTEM

The Vote Data Management Subsystem encompasses the management, processing, and reporting of voting data after it has been consolidated at the Polling Place.

The Optech Insight does not provide this function. The AERO accumulation system provides the above functionality, at the Central Counting Location.

1.7 GENERAL SYSTEM SPECIFICATIONS

This sub-chapter defines the following General System Specifications:

- Ballot
- Optech Insight

1.7.1 BALLOT

The ballot is the printed document which provides a Voter the opportunity to vote for all appropriate candidates and ballot measures by using an appropriate Marking Device to indicate selections in available voting positions. The ballot shall have two detachable serialized stubs.

All ballots are controlled by the Secretary of State, pursuant to California Administrative Regulations, and shall be printed with distinctive tints and designs as specified by the Secretary of State, and shall be produced and distributed in accordance with regulations adopted by the Secretary of State.

The ballot with its two perforated stubs may be of various dimensions. After removal of all stubs, the ballot may be one of these three widths: 3.75, 6.75, 9.75 inches. The length must be a maximum of 18 inches, and a minimum of 12 inches. With the ballot held in portrait orientation, such as a letter or this typed page would normally be held for reading, the several parts are: a serialized binding stub at the top; followed by a serialized Voter's stub, and the main processible ballot section. The binding stub is the stub stitched or stapled to a pad when the ballots are gathered, and is the part remaining affixed to the pad when the Voter's ballot and attached Voter stub have been removed for voting.

All voting positions on the ballot are indicated by a partially completed arrow printed opposite the names of candidates, opposite the available Write-In spaces, and opposite The For or against (Yes/No) ballot measure indications. Such arrows shall be uniform throughout the ballot, and shall be of such a design as to suggest the necessity of a mark to "fill in" a blank space between the arrow head and tail, and thus indicate a voting choice.

The ballot may be scored horizontally for folding, but not vertically. The folding score shall not intersect a voting position.

If any voting position on the ballot is used for more than one candidate or ballot measure at the same election, each such ballot shall have a ballot style identification code printed thereon.

A party identification code shall be printed on each ballot at the statewide direct primary election.

For more detail, please see the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*.

1.7.1.1 BALLOT WRITE-IN VOTING POSITION

For each office, immediately below the space on which the last candidate's name is printed, there shall be a space or spaces available for the Voter to cast Write-In votes when required. These spaces shall be equal in number to the number of persons to be elected to the office. Opposite each Write-In space shall be printed a voting position arrow.

For more detail, please see the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*.

1.7.1.2 BALLOT DISPOSITION

The various ballot classifications are as follows:

- Regular Ballot
- Blank Ballot
- Unvoted Major Office Ballot (option)
- Overvoted Ballot
- Undervoted Ballot
- Write-In Ballot
- Cross-Voted Ballot
- Error Ballot
- Unprocessable Ballot

For details on the above Ballot Disposition, please see *Appendix C: Ballot Disposition*, also for the Overridden Error Ballot (Option).

1.7.2 OPTECH INSIGHT

The Optech Insight shall:

- Provide facilities for voting for such candidates as may be nominated and upon such questions as may be submitted.
- Permit each Voter in a presidential general election to vote by making a single selection for electors for a pair of candidates for President and Vice-President of the United States.
- Provide a method for Write-In voting and shall report the number of votes cast in each contest in Write-In voting positions.
- Permit each Voter to vote for any person, for any office, for as many persons for an office, and for or against any question for which the Voter is entitled.
- Permit and require voting in absolute secrecy, and shall be so constructed that no person can see or know for whom any other Voter has voted or is voting, except Voters receiving assistance as prescribed by law.
- Be constructed of material of good quality, in a neat and workmanlike manner.
- Be safely transported.
- The Optech Insight must be maintained in a satisfactory manner in accordance with vendor specifications, where available.
- Individual component testing, and maintenance if necessary, shall be performed by qualified personnel within 50 days before each election. At the time of this writing, such hardware consists of the Optech Insight as described herein.

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2 Pre-Election Procedures

This chapter defines the following Pre-Election Procedures for the Optech Insight:

- Diagnostic Tests
- Annual Preventive Maintenance
- Ballot Specifications Diagnostic Testing
- System Proofing
- Pre-Election Setup
- Adjusting Ballot Guide for Ballot Size
- Initializing Election
- Pre-Election LAT
- Preparation of Optech Insight for Delivery to Polling Place
- Inspection and Delivery of Precinct Supplies
- Retention of Test Materials and Results
- Logic and Accuracy Board
- Ballot Tally Programs
- Election Observer Panel
- Hardware Maintenance

Complete testing of the voting machines shall be conducted before the use of this equipment in an election. This testing is required for equipment to be used in Polling Places.

Testing of the Optech Insight as set forth in this chapter shall include every unit to be used.

The test procedures described herein are a required MINIMUM and do not preclude additional testing performed at the option of the Election Official.

In addition to the following test procedures, those counties which provide election night results on-line to the Secretary of State must conduct tests required by that office to ensure accurate and timely submission of semi-official canvass results, and must include hardware and telephone lines used for that purpose in all tests required.

All tests will be conducted using test materials specified herein in such a manner as to meet these guidelines. All tests shall result in reporting that matches predetermined results. Reports and test materials must be retained as specified in *sub-chapter 2.11: Retention of Test Materials and Results*, herein.

2.1 DIAGNOSTIC TESTS

Maintenance Diagnostics comprise the following Diagnostic Tests, per the *Optech Insight Maintenance Manual*:

Group 1 Tests: BASIC FUNCTIONAL TESTS -- No MemoryPack Required:

- 0 – Print This Message
- 1 -Toggle Beeper On and Off
- 2 - Toggle Ready Light On and Off
- 3 -Toggle Motor On and Off Forward
- 4 - Toggle Motor On and Off Reverse
- 5 - Toggle Ballot Lights On and Off
- 7A - Path Sensor Clear Check
- 7B - Path Sensor Functional Check
- 8 - Test Public Counter Display
- 9 - Test the Printer

Group 2 Tests: BALLOT HANDLING TESTS: No MemoryPack Required:

- T0 - Ballots to Rear Bin
- T1 - Ballots to Center Bin
- T3 - Return Ballots to Voter

Group 3 Tests: DIAGNOSTIC TEST: Require a MemoryPack:

- F0 - MemoryPack RAM Test
- F1 - Burn-In Mode W/Power Failure Recover
- F2 - Set Time and Date
- F3 - Adjust Time Setting
- F4 - Print Time and Date
- F5 - Set Test Ballot Width
- F6 - Ballot Image Test

2.2 ANNUAL PREVENTIVE MAINTENANCE

The following Annual Preventive Maintenance is performed, per the *Optech Insight Maintenance Manual*:

- Checking the Ballot Thickness
- MemoryPack Battery Test
- MemoryPack Data Retention Test

2.3 BALLOT SPECIFICATIONS DIAGNOSTIC TESTING

Upon receipt of official ballots from the printer, the Election Official shall refer to the Ballot Inspection Procedure which is available from the Secretary of State, having been filed by the manufacturer of the Optech Insight Voting System. Said Procedure is incorporated herein by reference. The election official shall inspect ballots according to said Procedure to be sure that they meet certain minimum criteria for the following, per the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*:

- Ballot Format, with respect to number of columns, front and back printing, the inclusion of all ballot styles, precinct identifications if expected, and within each ballot style the listing in proper order of offices, measures, candidates and response positions.
- Ballot Paper Stock. (Use an appropriate measuring device, or accept the Printer's written declaration.)
- Ballot width Accuracy. (Measure according to specifications.)
- Printing registration, relative to edges of ballot. (Observe that cut marks appear consistently along each edge.)
- Ink density for readable marks.
- Voids in readable areas. (There shall be no extraneous printing, such as dots, splashes, etc., in the empty area between voting position arrow head and tail, nor in the header coding area.)
- Readable mark size.
- Ink offset
- Ink bleed-through and smears
- Slits or perforations
- Positioning of fold scores. (These shall not intersect voting positions.)

2.4 SYSTEM PROOFING

System proofing is the preliminary, in-house testing of all phases of Election Coding except the Logic and Accuracy tests of the computer hardware and software used to tabulate and summarize ballots. System proofing shall include, but is not limited to, verification of the correctness of the following:

- Assignment of jurisdictions participating in the election to Ballot Styles
- Linkage of precincts in which the election will be held to Ballot Styles
- Ballot content of each Ballot Style, including offices, district designations, candidate assignment and Rotation, ballot measures, all in the proper sequence
- Printing of official ballots, including instructions, candidates' names, political and/or occupational designations, number to be elected, candidate Rotation (where applicable), ballot measures, voting positions and all column and office headings and designations
- Formatting of ballots into or for sample ballot pamphlets for each Ballot Style
- Header code printing, precinct identification (if used), start and stop lines, fold scoring, numbering, padding and verifying ballot dimensions by suitable means
- Optech Insight recognition of and response to precinct Header Codes, and ballots that are damaged, or improperly marked
- Optech Insight ability to accept ballots with correctly printed Header Codes, and to reject ballots with incorrectly printed Header Codes
- All phases of preparation and assembly of the Optech Insight as described variously herein
- Voter registration data for jurisdictions participating in the election

The Reusable Test Deck consists of ballots which are pre-scored for folding. If the Optech Insight is to be used for Absentee tabulation, test ballots may be folded before the test is begun.

2.4.1 EXCEPTION PROCESSING

Exception Processing is part of system proofing and includes a test to determine whether the system properly responds to error or anomaly conditions. At least 10 days prior to each election a deck shall be prepared which will cause all non-destructive¹ errors or anomalies for the Optech Insight. The Optech Insight is tolerant of ballots introduced in orientations which could be considered anomalous, such as upside down or reversed. This tolerance should be tested by introducing test ballots in these orientations. The exception processing test should contain, but is not limited to, the following types of conditions, if they apply to the system:

- Upside down ballots
- Reversed ballots
- Ballots torn in various places

Exception testing is also required to assure that the error condition of extraneous clock marks is detected.

2.4.2 ERROR BALLOTS

Six ballots shall be prepared, as follows:

- One ballot for each votable track on a double-sided, 3-column ballot
- Four ballots for a double-sided, 2-column ballot
- Two ballots for a double-sided, 1-column ballot.

One extra Voting Arrow mark shall be made in an active column of the ballot. The extra Voting Arrow mark shall be drawn between the ballot start and the ballot stop and shall be drawn to approximate the thickness and dimension of the printed clock marks. Tests for Error Ballots will comply with the ballot processing regulations herein, per the *Optech Eagle/Insight & 400-C Ballot Specification & Printers Manual*.

For exception processing the ballot tabulation program(s) must be used. Program restarts or equipment resetting are allowed for this test.

2.5 PRE-ELECTION SETUP

Please see the *Optech Insight Operators Manual* for the following Pre-Election Setup procedures:

- Cleaning Optech Insight
- Changing Paper Tape

¹ As opposed to destructive errors, such as a power failure, which can damage equipment.

2.6 ADJUSTING BALLOT GUIDE FOR BALLOT SIZE

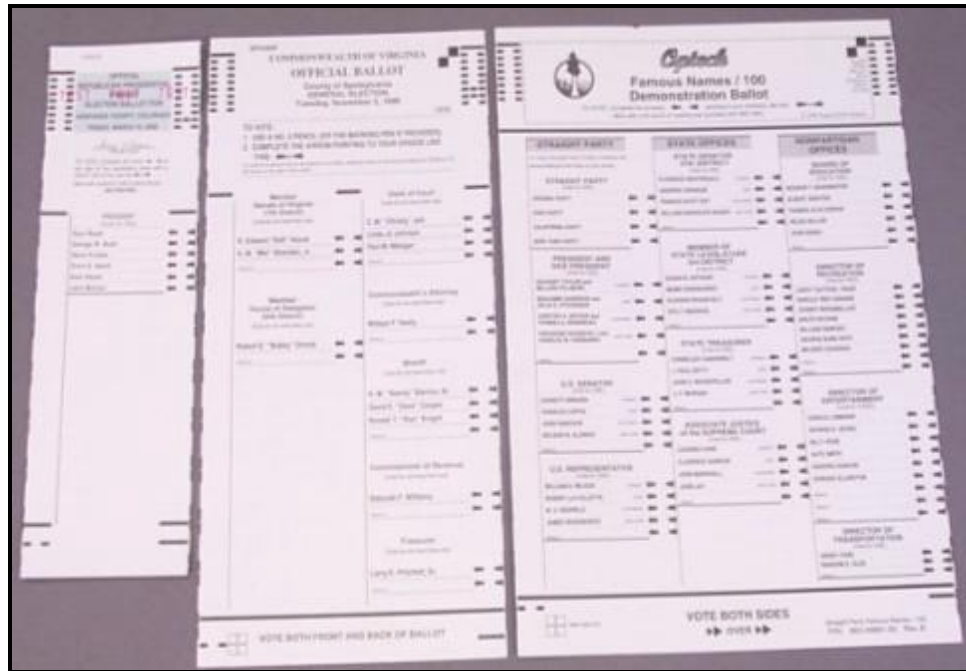


Figure 2-1: Ballot: 1, 2, and 3 Columns

The Optech Insight can be adjusted to accept the following types of ballots:

- 1 Column
- 2 Columns
- 3 Columns

The Election Authority for the jurisdiction determines the ballot width.

For more details on adjusting the Ballot Guide for Ballot Size, please see the *Optech Insight Operators Manual*.

2.7 INITIALIZING ELECTION

Perform the following steps to initialize the Optech Insight for an election:

1. A 4-digit Access Code (obtained from the Operator who coded the election in EMS) is required in order to initialize the election. The Maintenance Technician will use the Keypad to enter it.

The Optech Insight will print messages indicating whether or not access has been granted, per *sub-chapter 5.5: Access OK Messages*.

2. If access has been granted, the Maintenance Technician will press the [6] and [7] keys simultaneously, to generate a message which provides the following information:
 - TIME AND DATE
 - FULL ELECTION INITIALIZATION (Everything set to zero)
3. The Maintenance Technician is given a chance to confirm whether or not the information is correct.
 - If correct, the election is initialized.
 - If Not correct, the election is NOT initialized.

Please see the *Optech Insight Maintenance Manual* for more detail on this procedure.

2.8 PRE-ELECTION LAT

Please see *Appendix D: Logic and Accuracy Testing*, for the following discussion:

- Pre-Conditions
- Performing Pre-Election LAT
- Logic Testing
- Accuracy Testing
- Test Deck Tabulation Results

2.9 PREPARATION OF OPTECH INSIGHT FOR DELIVERY TO POLLING PLACE

The Optech Insight should be prepared for delivery to the Polling Place, as follows, per the *Optech Insight Operators Manual*:

1. The following Pre-Election Procedures should already have been performed, per the following sub-chapters:
 - *2.1: Diagnostic Tests*
 - *2.2: Annual Preventive Maintenance*
 - *2.3: Ballot Specifications Diagnostic Testing*
 - *2.4: System Proofing*
 - *2.5: Pre-Election Setup*
 - *2.6: Adjusting Ballot Guide for Ballot Size*
 - *2.7: Initializing Election*
 - *2.8: Logic and Accuracy Testing*
2. The MemoryPack should be inserted into the Optech Insight, and sealed.
3. The Rear Access Lid should be locked.
4. The following should also be included as a part of the delivery:
 - Ballot Guide Bar
 - Southco Key
 - Red Key
 - Green Key
 - Anti-static bag for the MemoryPack
 - Optech Insight Power Cord

2.10 INSPECTION AND DELIVERY OF PRECINCT SUPPLIES

Instruct the Precinct Board to make the following checks prior to Election Day:

1. Check all pads of ballots to ensure that ballot style identification numbers, serial numbers, and precinct numbers (if used) printed on the ballots are correct
2. Report any problems to the Election Official responsible for the election.

3. Supplies necessary for the conduct of elections at Polling Places shall be delivered as follows:
 - Ballots shall be in the quantity and manner required by the California Elections Code, as well as demonstrator ballots marked for Demonstration use only.
 - In primary elections, ballots shall be appropriately tinted for each political party and for nonpartisan Voters, as directed by the Secretary of State.
 - Demonstration or voting instruction placards.
 - General purpose precinct supplies as provided in the California Elections Code.
 - Secrecy sleeves or envelopes, if ballots are printed on two sides.
 - Marking Devices.
 - A Certificate of Packaging and Sealing, in duplicate, together with a postage paid self-addressed stamped business reply envelope, or postcard addressed to the responsible Election Official.
 - Sample ballots of each ballot style as required by the California Elections Code.
 - Seals and any other supplies and forms deemed necessary.

2.11 RETENTION OF TEST MATERIALS AND RESULTS

The successful logic and accuracy tests, conducted at the time of certification (or recertification, if necessary) to the Secretary of State, storage logs or records, if any, and balancing reports, if any, shall be retained as long as the ballots are kept for the election. The official logic test ballot cards used for balancing prior to and upon completion of processing official ballots shall also be kept for as long as the ballots are kept. Back-up decks and other test decks may be destroyed or used to train operators for other elections.

2.12 LOGIC AND ACCURACY BOARD

The election official shall establish a Logic and Accuracy Board to complete certification of testing. Not later than seven (7) days before each statewide election, the Secretary of State must receive a copy of the Logic and Accuracy Board's certification. For local and district elections, the Logic and Accuracy Board members shall submit their copy of the Logic and Accuracy Board's certification to the local election official conducting the election.

The Logic and Accuracy Board shall be comprised of the same persons prior to, during, and after the election. The Board shall have the following duties:

- Receive from the election official all required test materials and take steps to ensure the security of said materials prior to, during, and after the election, except when the materials are properly in the possession of one of the other boards or election officials as required by these procedures.
- Verify the correctness of the logic and accuracy test MemoryPacks and the logic and accuracy test ballots. This verification shall also be required for any of such material which must be replaced.
- Observe the performance and verify results of all required tests.
- Note any discrepancies and problems and affirm their resolution or correction.
- Deliver into the custody of the election official all required test materials and printed output.
- Certify to the performance of each of the above-prescribed duties as well as those otherwise established by the procedures; provide that all members of the Board shall sign the appropriate certificate or certificates.

Please see the following:

- *Sub-chapter: 6.4: Logic and Accuracy Certification*
- *Sub-chapter 6.5: Logic and Accuracy Board*
- *Appendix E.1: Certification by Logic and Accuracy Board.*

2.13 BALLOT TALLY PROGRAMS

The election official shall send ballot tally programs to the Secretary of State pursuant to *sub-chapter 6.6: Submittal of Ballot Tabulation Programs to Secretary of State*, herein. These must be received by the Secretary of State no later than seven (7) days before each statewide election.

2.14 ELECTION OBSERVER PANEL

The election official shall establish an Election Observer Panel pursuant to *sub-chapter 6.3: Election Observer Panel*, herein.

2.15 HARDWARE MAINTENANCE

The Optech Insight must be maintained in a satisfactory manner in accordance with vendor specifications, per the *Optech Insight Maintenance Manual*.

Individual component testing, and maintenance if necessary, shall be performed by qualified personnel within 50 days before each election. At the time of this writing, such hardware consists of Optech Insight as described herein.

3 Election Day Procedures

This chapter defines the following Election Procedures for the Optech Insight:

- Opening the Polls
- Official Election
- Closing the Polls

3.1 OPENING THE POLLS

The details of Opening the Polls are described in the *Optech Insight Poll Workers Manual*.

Perform the following steps for Opening the Polls:

1. Verify that the serial number on the Optech Insight is the same number listed on the Verification Report, per the *Optech Insight Operators Manual*.
2. Set up the Ballot Box, per the *Optech Insight Poll Workers Manual*.

IMPORTANT: USE WIRE SEALS TO SEAL BALLOT BIN.

3. The MemoryPack should already be inserted into the Optech Insight, and sealed.
4. Unlock the Rear Access Lid, and power UP the Optech Insight, per the *Optech Insight Poll Workers Manual*.
5. Print out the Verification Reports, per the *Optech Insight Poll Workers Manual*.
6. Complete the Oath of Office and Declaration of Intention forms pursuant to the California Elections Code.
7. Assemble voting booths and in each booth display a copy of materials required by the California Elections Code.
8. Make a pad of Demonstration Ballots, Marking Devices, and suitable Demonstration materials available.

3.2 OFFICIAL ELECTION

The Official Election comprises the following:

- If a Ballot Read Before Poll Opening Time
- First Ballot
- Voting Procedures
- Procedure for Ballot Returned to Voter
- Provisional Voting
- Surrender of Absentee Ballot
- Return of a Voted Absentee Ballot
- In the Event of Power or Unit Failure
- Changing Paper Tape
- Special Procedures for Resolving Problems

The details of Official Election are described in the *Optech Insight Poll Workers Manual*.

3.2.1 IF A BALLOT READ BEFORE POLL OPENING TIME

If a ballot is read before poll opening time, the following message will be generated.

```
It is now 6:56:11 AM, 11/18/02
First ballot should not be cast
until 7:00:00 AM, 11/18/02
Pull the ballot out and wait, OR
Press the "3" key to override the time check
for this and other ballots
```

At this time the Poll Worker has the following two options.

- **Option #1:** Pull the ballot out and wait until the poll opening time arrives. When the ballot is pulled out, the following message will be generated.

```
6:56:20 BALLOT PULLED OUT
```

When the poll opening time arrives, ballots can then be read without generating the poll opening message.

- **Option #2:** Press the [3] key rather than pulling out the ballot. This causes the ballot to be tabulated and generates the following message.

```
6:56:30 POLLS OPEN TIME WILL BE IGNORED
```

Additional ballots may now also be tabulated without generating the poll opening message.

3.2.2 FIRST BALLOT

The very first ballot cast, whether good or bad, will cause a "First Ballot Read" message to be printed, per the following example.

```
7:00:30 First ballot read
```

This message includes the time so that in a post election audit it can be seen when the first ballot was actually inserted and read

3.2.3 VOTING PROCEDURES

1. During the day, at least every hour, inspect each booth to ensure that there are no electioneering materials present and that the booth is otherwise suitable for voting ballots. As far as possible, defacement conditions shall be corrected.
2. Offer to instruct each Voter in the proper method of voting by completing the arrow graphic, casting Write-In votes and using the secrecy sleeve. Offer each Voter further instruction and practice time, if necessary.
3. Write-In space is provided on the ballot. The Voter must both write the name of the candidate and complete the voting position arrow.

4. The Voter, upon leaving the voting booth, shall place their voted ballot in the secrecy sleeve with stub exposed and proceed to the ballot box station. There, a Poll Worker shall remove the stub and hand it to the Voter. This same Poll Worker shall next deposit the ballot in the ballot box, keeping the voted ballot hidden from view, but holding the secrecy sleeve so that it is not deposited in the ballot box along with the voted ballot. The empty secrecy sleeve may be reissued to later arriving Voters. If the ballot is printed on only one side, use of a secrecy sleeve is optional.
5. Monitor Voter and machine operation. The Public Counter Display should increment for each Voter and should equal the number of ballots issued, less any currently in the hands of Voters.
6. Help Voters that require physical assistance, etc., per local statute.

3.2.4 PROCEDURE FOR BALLOT RETURNED TO VOTER

A ballot may be returned to Voter for any of the following reasons, per *Appendix C: Ballot Disposition*:

- Blank Ballot
- Unvoted Major Office Ballot (option)
- Overvoted Ballot
- Undervoted Ballot
- Cross-Voted Ballot
- Error Ballot
- Unprocessable Ballot

Depending upon the reason for return, jurisdiction, and options encoded into the Election Parameter data (by using the EMS coding system), the following options are available for resolution:

- Trying Ballot Again
- Issuing New Ballot
- Placing Ballot in Auxiliary Bin
- Overriding Ballot (option)

Trying Ballot Again:

In the following cases, the Poll Worker may try the ballot, again:

- Blank Ballot
- Unvoted Major Office Ballot (option): After Voter has voted the major office
- Cross-Voted Ballot
- Unprocessable Ballot

Issuing New Ballot:

If the Voter chooses to vote a new ballot, the Poll Worker pulls the ballot out of the Ballot Slot, and places it into a Spoiled Ballot envelope. A new ballot is issued to the Voter after a review with the Voter of how to correct the problem.

Placing Ballot in Auxiliary Bin:

The Poll Worker pulls the ballot out of the Ballot Slot, and places it in the Auxiliary Bin for review after Closing the Polls

Overriding Ballot (Option):

If the Voter chooses not to vote a new ballot, the Poll Worker presses the [3] Override Error Ballot key while the leading edge of the ballot is still in the Ballot Slot. This will cause the Optech Insight to re-read the ballot but this time the ballot will not be returned to Voter. Instead, it will be processed, per *Appendix C.9: Overridden Error Ballot (Option)*.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

Please see the *Optech Insight Poll Workers Manual* for the procedure.

3.2.5 PROVISIONAL VOTING

Provisional Ballots are in substantially the form of absent voter ballots and are to be used at all elections by voters who claim to be registered but who's right to vote cannot be immediately established.

Provisional Ballot envelopes shall be printed in substantially the same form as absent voter ballot envelopes, but shall be distinguished by a different color or other means of discrete identification.

Procedures for tallying Provisional Ballots shall be those set forth in the California Elections Code and by the election official.

- Provisional Ballots are in substantially the form of Absentee Ballots and are to be used at all elections by Voters who claim to be registered but who's right to vote cannot be immediately established.
- Provisional Ballot envelopes shall be printed in substantially the same form as Absentee Ballot envelopes, but shall be distinguished by a different color or other means of discrete identification.
- Procedures for tabulating Provisional Ballots shall be those set forth in the California Elections Code and by the Election Official.

3.2.6 SURRENDER OF ABSENTEE BALLOT

- No person to whom an Absentee Ballot was issued is permitted to vote at the Polling Place unless he/she surrenders the ballot. The ballot is to be marked "SURRENDERED" and placed in the appropriate container as specified by the Election Official. The Voter is then permitted to vote in the normal method for the precinct.
- Any person to whom an Absentee Ballot was issued may vote a precinct Voter ballot provisionally without surrendering the original ballot by providing precinct officials with a statement, signed under penalty of perjury, that the Voter has not voted and will not vote any other ballot in that election.

3.2.7 RETURN OF A VOTED ABSENTEE BALLOT

- If a Voter returns a voted Absentee Ballot, verify that the ballot is sealed into and that the signature of the Voter is on the identification envelope. Require any person who returns an Absentee Ballot in person, either to a Polling Place or Central Counting Location, to sign an envelope, log or record before depositing their voted and sealed ballot in the specially marked container.

3.2.8 IN THE EVENT OF POWER OR UNIT FAILURE

If for any reason the Optech Insight becomes inoperable during the polling hours and will no longer accept ballots, the Poll Workers must use the Auxiliary Bin, per *paragraph 1.5.4: Ballot Box*. If this occurs, the green light on the front panel will probably be off. The red power-light may or may not still be on. If the Optech Insight will no longer accept ballots, the Poll Worker should immediately call election headquarters and then proceed with the procedure listed in the *Optech Insight Poll Workers Manual*.

3.2.9 CHANGING PAPER TAPE

A red stripe along the edges of the results tape indicates that the Paper Tape is almost empty and should be replaced.

Please see the *Optech Insight Poll Workers Manual* for the procedure.

3.2.10 SPECIAL PROCEDURES FOR RESOLVING PROBLEMS

Special Procedures for Resolving Problems comprise the following:

- Central Trouble Review Board
- Technician Dispatch
- Technician Reporting

For more details, please see the *Optech Insight Maintenance Manual*.

Central Trouble Review Board:

Trained Maintenance Technicians and Administrative personnel make up the Central Trouble Review Board.

The function of the Central Trouble Review Board is to assist Poll Workers in resolving all problems that they may have while conducting the election.

Trained Maintenance Technicians should be available to assist in diagnosing problems on the telephone. Administrative personnel should be available to answer questions of Voter registration and supplies requirements.

Technician Dispatch:

Certain problems will require that a Maintenance Technician go to the Polling Place to deliver supplies or resolve a problem.

Technician Reporting:

Maintenance Technicians will keep a log of each precinct they visit on Election Day.

3.3 CLOSING THE POLLS

Closing the Polls comprises the following activities:

- If Poll Closing Operation Started Before Poll Closing Time
- Procedure
- Procedure for Absentee Ballots
- Procedure for Provisional Ballots
- Procedure for Non-Optech Insight Ballots
- Return of Voted Ballots to Election Official
- Distribution of Election Returns Tape

The details of Closing the Polls are described in the *Optech Insight Poll Workers Manual*.

IMPORTANT: THE FOLLOWING PROCEDURES MUST BE COMPLETED IN PUBLIC VIEW.

3.3.1 IF POLL CLOSING OPERATION STARTED BEFORE POLL CLOSING TIME

If the poll closing operation is started before the poll closing time, the standard message is preceded with the following “polls should not be closed until . . .” message.

It is now 7:55:41 PM, 11/18/02
Polls should not be closed
until 8:00:00 PM, 11/18/02

8:55:43 PM, 11/18/02
REQUEST TO CLOSE THE POLLS
(Print totals, no more ballot reading)

Press 0 key if this is OK, 9 if NOT

At this time the Poll Worker has three options.

Option #1: Override the poll closing message and press the [0] key. This will close the polls and generate the vote totals report. No more ballots may be read.

Option #2: Do not press the [0] key and wait until the official poll closing time and then press the [0] key.

Option #3: Press the [9] key which allows more ballots to be read, and then when the poll closing time does arrive to start the poll closing operation all over again by pressing the [Print Totals] key.

Note that while the clock in the MemoryPack is normally within one minute of the correct time, there are two possible reasons for it to be incorrect:

- The time in the MemoryPack is normally set by EMS at the time the MemoryPack is burned using the system clock of the EMS PC which may have been set incorrectly when the MemoryPack was burned.
- The clock crystal chip in the MemoryPack may be out of spec, which will cause the time in the MemoryPack to “drift” in one direction or the other.

Because of these possibilities, Poll Workers should be instructed to take a practical attitude toward the warning messages presented above.

3.3.2 PROCEDURE

1. Promptly at 8 p.m. declare, "The polls are closed."
 - Any Voter in line at the closing must be allowed to vote.
 - No one who arrives after 8 p.m. may vote.
2. Print the Totals Reports, per the *Optech Insight Poll Workers Manual*.
3. Unlock the Rear Access Lid, and power OFF the Optech Insight.

WARNING! DO NOT REMOVE THE MEMORYPACK FROM THE OPTECH INSIGHT WHILE POWER TO THE OPTECH INSIGHT IS ON! YOU COULD DESTROY ELECTION DATA!

4. Break the seal, and remove the MemoryPack from the Optech Insight.

NOTE: Some jurisdictions stipulate that the MemoryPack be left in the Optech Insight. Check your election procedures.

- a. Place the broken seal in the plastic bag marked Seals and return this bag to the Election Board. If required, record the Seal number in the appropriate column on your Poll workers log sheet.
- b. Place the MemoryPack in its anti-static padded bag.

NOTE: The anti-static bag ensures that the Precinct Totals stored in the MemoryPack are not damaged by static electricity or mishandling.

- c. Return the MemoryPack (in its bag) to the Election Board.
5. Deface and/or seal all Unused Ballots, as directed
6. Complete the Ballot Statement, using the Ballot Totals Report to provide the following information:
 - a. Total number of official ballots received from the Election Official
 - Counted
 - Not Counted
 - Total Ballots Cast
 - b. The Total Ballot Cast number should equal the number of official ballots entered as received from the Election Official, herein.
 - c. An explanation of any discrepancy shall be shown.
7. Reconcile the Total Ballots Cast number to the number of signatures in the Roster-Index. Explain any discrepancy.
8. Complete the "Certificate to Roster" showing:
 - The name(s) of person(s) who, after signing the Roster, failed to vote because of challenge, or other reason
 - The number of persons who voted in the precinct
 - A certification to the accuracy of the Ballot Statement
 - The signatures of all Board Members

9. Remove ballots from Ballot Box:

WARNING! CHECK WITH YOUR ELECTION HEADQUARTERS BEFORE REMOVING ANY BALLOTS FROM THE BALLOT BOX. SOME JURISDICTIONS LEAVE BALLOTS LOCKED IN THE BALLOT BOX.

- a. Unlock the Ballot Box door, and open.
- b. Remove the ballots from the Auxiliary Bin, and stack them on top of the Ballot Box or a table.
- c. Remove the ballots from the Center Bin, and stack them on top of the Ballot Box or a table. Keep these ballots separate from other ballots.
- d. Remove the ballots from the Rear Bin, and stack them on top of the Ballot Box or a table. Keep these ballots separate from the other ballots.

WARNING! KEEP THE BALLOTS FROM EACH BIN SEPARATED AND LABELED WITH THE NAME OF THE BIN THEY CAME FROM. THIS IS MANDATORY IN CASE OF A RECOUNT AND AS AN AUDIT TRAIL.

- e. Carefully pack the ballots in the separate cases and return these cases to the Election Board.

10. Package for return as follows:

Verify that the following numbers have been correctly entered on the Certificate of Packaging and Sealing:

- Rear Bin (from the Ballot Totals Report)
- Center Bin (from the Ballot Totals Report)
- Ballots in Auxiliary Bin (Check Auxiliary Bin Ballots, per the *Optech Insight Poll Workers Manual*.)
- Provisional Ballots (from the Provisional Ballot envelopes)

Verify that the required materials have been placed into the appropriate container or containers, listing the materials inserted in each container and indicating that the container or containers were appropriately sealed. After all entries have been completed, each member of the Precinct Board shall sign the Certificate. After the polls close, the original Certificate of Packaging and Sealing shall be mailed to the Election Official by a member of the Precinct Board other than the members who return the ballot container. A self-addressed stamped envelope shall have been provided for this specific purpose. The copy of the Certificate of Packaging and Sealing shall accompany the ballot container to the Central Counting Location.

3.3.3 PROCEDURE FOR ABSENTEE BALLOTS

If voted Absentee Ballots were placed in the ballot box:

1. Leave Identification Envelopes sealed.
2. Enter the number of such ballots in the appropriate space on the Certificate of Packaging and Sealing.
3. Place the ballots in the designated container for return to the Election Official.

3.3.4 PROCEDURE FOR PROVISIONAL BALLOTS

1. Enter the number of Provisional Ballots removed from the ballot box in the appropriate space on the Certificate of Packaging and Sealing, and place the ballots in the designated container.

3.3.5 PROCEDURE FOR NON-OPTECH INSIGHT BALLOTS

1. Process non-Optech Insight Ballots by tabulating the number of ballots other than Optech Insight ballots that might be used in the election in the manner prescribed by the California Elections Code. Seal voted ballots as directed.

3.3.6 RETURN OF VOTED BALLOTS TO ELECTION OFFICIAL

2. Return all ballots and supplies as directed by the Election Official.
3. At least two precinct board members must accompany all ballots until they are in the custody of the Election Official and a properly-executed receipt has been provided

<p><i>IMPORTANT: DO NOT RELEASE BALLOTS TO CUSTODY OF ANY OTHER PERSON WITHOUT FIRST OBTAINING A RECEIPT.</i></p>
--

3.3.7 DISTRIBUTION OF ELECTION RETURNS TAPE

1. Return the first Results Vote Totals Report, complete with the election officials' signatures, to the Election Board. This is the Official Election Returns Tape.
2. Generate additional Results Vote Totals Report printouts by pressing the **[Print Totals]** key (quantity is set per instructions from your jurisdiction).
3. Have an election official sign each of these printouts in the place indicated, if required by your jurisdiction.
4. Distribute additional Results Vote Totals Reports per instructions from your jurisdiction.

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4 Post-Election Procedures

NOTE: Once the Precinct Totals have been transported to the Central Counting Location, the AERO accumulation system is used to accumulate Election Totals and generate reports.

This section covers the following steps for care and storage of the Optech Insight after an election. The Maintenance Technician performs the following preventive maintenance procedures AFTER each election before storing the Optech Insight:

- Cleaning Optech Insight
- Changing Paper Tape, If Required
- Storing Optech Insight

4.1 CLEANING OPTECH INSIGHT

Please see the *Optech Insight Maintenance Manual*.

4.2 CHANGING PAPER TAPE, IF REQUIRED

If required, change the Paper Tape, per the *Optech Insight Maintenance Manual*.

4.3 STORING OPTECH INSIGHT

The Optech Insight should be stored as follows:

1. Fold the Power Cord and store it in its bag.
2. To store the Optech Insight, put it in its Mylar anti-static plastic bag and place it in the shipping container; store in a clean, dry storage area.
3. Store the keys in a safe place or tape them to each unit.

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5 System Management and Security

This chapter defines the following System Management and Security for the Optech Insight:

- System Security
- Audit Trail
- Statistical Ballot Data Required
- Diagnostic Test Results
- Access OK Messages
- Polls Opening/Closing Time Messages (Option)
- If Ballot Read Before Poll Opening Time
- First Ballot Read Message
- “Return to Voter” Messages
- Power ON Report (After Power Failure)
- If Poll Closing Operation Started Before Poll Closing Time

The Local Election Official has management control over all resources employed during the voting and Ballot Tabulation process until the control is voluntarily relinquished when no longer needed.

If it becomes necessary to transfer control of any equipment back to the vendor for repairs, operational elections activity may not be carried out on the equipment while it is under the vendor’s control.

5.1 SYSTEM SECURITY

The Election Official shall ensure the protection of the tabulation process from intentional and/or fraudulent manipulation, malicious mischief, accidents, and errors.

Within one year following the adoption of these procedures, each jurisdiction shall:

- Establish procedures to identify changes to the Ballot Tabulation system, including dates and times that files are created, modified, or accessed, and by whom. These procedures must also include a checklist and sign-off requirement for Logic Testing.
- Establish procedures for the physical protection of facilities, including intrusion and fire alarms, temperature and humidity sensors, etc.

The procedures shall also include provisions for locked facilities for computers which are dedicated discretely to elections as well as for voted and non-voted ballots and tabulated and un-tabulated ballots. Such procedures shall not preclude the accessibility of the Optech Insight nor computers for purposes of testing, repair, demonstration, training or for other purposes, which are deemed justifiable by the Election Official.

- Establish contingency plans for Ballot Tabulation, including either backup Ballot Tabulation facilities under the Election Official’s supervision, or the availability of such facilities from another jurisdiction, or from a vendor, or from another source. Such plans may take note of the existence of multiple units, if such is the case, citing these situations as adequate backup.

In addition to the Ballot Tabulation program sent to the Secretary of State, each Election Official shall store another copy of the Ballot Tabulation program in an off site secure-but-readily-accessible location.

- Establish procedures for internal security, i.e., the protection of Ballot Tabulation hardware, firmware, and software from fraudulent manipulation by persons within the elections office.

These procedures must provide for:

- o Restricted access to Ballot Tabulation hardware, firmware, and software
- o Individual passwords which must be complex and frequently changed
- o Physical protection of all non-voted precinct and Absentee Ballots, as well as of all tabulated and un-tabulated ballots, by use of logs to chronicle their quantity, use, and access before and after the election

A complete copy of each Election Official's security procedures shall be submitted to the Secretary of State for review and approval by February 1 of each even-numbered year beginning with the adoption of this set of procedures. In lieu of the annual submission of this plan, the Election Official may affirm that no change has been made to previously approved procedures, or may submit updates to the procedures on a continuing basis. If no such plan has been formulated prior to February 1, after the adoption of these procedures, it shall be submitted when completed.

5.2 AUDIT TRAIL

All Ballot Tabulation operations, including mandated Pre- and Post-Election testing, are documented in sequential order in the Electronic Log Report, along with an automated log which records the time and date of "system events" related to Ballot Tabulation.

The Electronic Log Report is continued until final certification of results.

The Electronic Log Report is printed while Closing the Polls.

It shall be:

- Retained for the same time period as ballots for that election
- Subject to the same physical security and integrity measures

This log or record, the Electronic Log Report, shall be continued until final certification of results, shall be retained for the same time period as ballots for that election, and shall be subject to the same physical security and integrity measures.

5.2.1 SYSTEM EVENTS

"System events" in the Ballot Tabulation process include the following, and are reported by the Electronic Log Report:

- Initiation of the Ballot Tabulation program
- Initiation of Ballot Tabulation
- Clearing totals
- Running logic and accuracy tests
- Hardware failures, if any
- Repairing hardware (including running accuracy tests after repairs), as needed
- System crashes and restarts, if any

5.2.2 SPECIFIC AUDIT TRAILS

The Electronic Log Report includes the following Audit Trail information:

- Exception Handling/Error messages during Ballot Tabulation, including:
 - o Messages generated by the computer's exception handlers or error routines
 - o Identification code and number of hardware and software failures (their source and disposition)
 - o Record of the operating system's data read/write/verify, parity or check sum errors and retries
- System status messages, such as:
 - o Diagnostic and status messages upon start up of Ballot Tabulation
 - o "Zero totals" check
 - o Initialization or termination of processing by the Optech Insight
- Operator interaction with system (TIME, ACTION TAKEN)
- Ballot-related exceptions (e.g., ballots not voting machine-readable, ballots requiring special handling, aborted or deleted precincts, etc.)
- Copies of required tests

5.3 STATISTICAL BALLOT DATA REQUIRED

The following data is critical to tracking and reporting the ballot counting process, and is maintained by the Optech Insight, per the *Optech Insight Operators Manual*:

- For the election definition phase, diagnostic proof listings of candidates and active vote positions for each ballot style or precinct is reported by the EMS election coding system (during Election Coding and Ballot Definition), and by the following reports, which are printed during Pre-Election LAT and while Opening the Polls:
 - o Zero Ballot Report
 - o Allowable Header Codes Report
 - o Zero Vote Totals Report
- The number of ballots read within each precinct, by type, including totals for each party in primary elections are reported in the Results Vote Totals Report, which is printed while Closing the Polls.
- The total number of ballots processed is reported in the Results Ballot Report, which is printed while Closing the Polls.
- Separate accumulations and reporting of the quantity of overvotes, undervotes, and write-ins within each precinct for each race or issue, is reported by the following reports, which are printed while Closing the Polls:
 - o Electronic Log Report
 - o Results Ballot Report
- Availability of the above information in summary and by precinct is included in the following reports, which are printed while Closing the Polls:
 - o Electronic Log Report
 - o Results Ballot Report
 - o Results Vote Totals Report

5.4 DIAGNOSTIC TEST RESULTS

Diagnostic Test Results are listed by the Diagnostic Routines (reports), per the *Optech Insight Maintenance Manual*.

Both pass and fail results will be reported by the Optech Insight.

5.5 ACCESS OK MESSAGES

The following Access OK Messages are reported by the Optech Insight.

```
ACCESS OK

02:29:36 PM, 11/18/02
REQUEST TO INITIALIZE VOTE TOTALS
(All totals set to zero!)

Press 0 key this is OK, 9 if NOT

OK

02:29:36 ALL TOTALS SET TO ZERO

MON., NOVEMBER 18, 2002  2:29:36 PM
PRECINCT 0100
CURRENT BALLOTS CAST =  000

Polls open. OK to read ballots
```

If access is not granted, that will also be reported by the Optech Insight.

5.6 POLLS OPENING/CLOSING TIME MESSAGES (OPTION)

If this option is encoded into the Election Parameter data, using the EMS election coding system, the following Polls Opening/Closing Time Messages will be displayed.

```
POLLS OPEN 6:00 AM, 11/07/00
POLLS CLOSE 8:00 PM, 11/07/00
```

5.7 IF BALLOT READ BEFORE POLL OPENING TIME

If a ballot is read before the poll opening time, the following message is generated.

```
It is now 6:56:11 AM, 11/18/02
First ballot should not be cast
until 7:00:00 AM, 11/18/02
Pull the ballot out and wait, OR
Press the "3" key to override the time check
for this and other ballots
```

5.8 FIRST BALLOT READ MESSAGE

The very first ballot cast, whether good or bad, will cause a "First Ballot Read" message to be printed, per the following example.

```
7:00:30 First ballot read
```

This message includes the time so that in a post election audit it can be seen when the first ballot was actually inserted and read

5.9 “RETURN TO VOTER” MESSAGES

5.9.1 BLANK BALLOT

Please see *appendix C.2: Blank Ballot*.

5.9.2 UNVOTED MAJOR OFFICE BALLOT (OPTION)

Please see *appendix C.3: Unvoted Major Office Ballot (Option)*.

5.9.3 OVERVOTED BALLOT

Please see *appendix C.4: Overvoted Ballot*.

5.9.4 UNDERVOTED BALLOT

Please see *appendix C.5: Undervoted Ballot*.

5.9.5 CROSS-VOTED BALLOT

Please see *appendix C.7: Cross-Voted Ballot*.

5.9.6 ERROR BALLOT

Please see *appendix C.8: Error Ballot*.

5.9.7 UNPROCESSABLE BALLOT

Please see *appendix C.9: Unprocessable Ballot*.

5.10 POWER ON REPORT (AFTER POWER FAILURE)

In the even of power failure, and the power is restored to the Optech Insight, the following report will be printed.

```

MON., NOVEMBER 18, 2002  10:06:02 AM
=====
BALLOT REPORT
=====
Insight serial number is 123,456
Protective counter number is 13,042

PRECINCT 0100
- COUNTED ----- 450
- NOT COUNTED ----- 000
= TOTAL BALLOTS CAST ----- ==> 450
  
```

5.11 IF POLL CLOSING OPERATION STARTED BEFORE POLL CLOSING TIME

If the poll closing operation is started before the poll closing time, the standard message is preceded with the following “polls should not be closed until . . .” message

It is now 7:55:41 PM, 11/18/02

Polls should not be closed
until 8:00:00 PM, 11/18/02

02:29:36 PM, 11/18/02

REQUEST TO CLOSE THE POLLS
(Print totals, no more ballot reading)

Press 0 key this is OK, 9 if NOT

6 Certification and Reporting Requirements

This chapter defines the following Certification and Reporting Requirements for the Optech Insight:

- Biennial Certification of Hardware
- Hardware Certification and Notification
- Election Observer Panel
- Logic and Accuracy Certification
- Logic and Accuracy Board
- Submittal of Ballot Tabulation Programs to Secretary of State
- Election Night and Post-Election Reporting
- Preparation of Specific Written Procedures

6.1 BIENNIAL CERTIFICATION OF HARDWARE

The California Elections Code requires each Election Official to inspect and certify the accuracy of their voting or vote tabulating equipment at least once every two (2) years. The Election Official shall certify the results of their inspection to the Secretary of State.

A copy of a sample certificate is attached to these procedures as *Appendix E.2: Certificate of Biennial Inspection*.

6.2 HARDWARE CERTIFICATION AND NOTIFICATION

6.2.1 CERTIFICATION

All ballot readers and specialized vote tabulating equipment must be certified for use in elections by the Secretary of State prior to use in any election.

Certification procedures are available upon request from the Secretary of State's Elections Division.

6.2.2 NOTIFICATION

For each statewide election, the responsible county Election Official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semi-official and official canvasses.

6.2.3 SEVEN (7) DAYS BEFORE STATEWIDE ELECTION

Seven (7) days before each statewide election, the Election Official shall certify to the Secretary of State the results of the logic tests as well as the accurate functioning of all Ballot Tabulation equipment. This certification shall also affirm the use of the same equipment for Pre-Election testing and for semi-official and official vote canvasses. In the event of a change to the Ballot Tabulation program occurring after this certification, an amended certificate shall be submitted no later than the day before the election.

6.2.4 IF ANY EQUIPMENT IS REPAIRED:

In the event any equipment is repaired, altered or replaced following the certification specified in *paragraph 6.2.3: Seven (7) Days Before Statewide Election*, herein and prior to completion of the official canvass of the vote, an amended certification of logic and accuracy testing and a revised list of equipment used must be submitted to the Secretary of State not later than submission of official canvass results.

6.3 ELECTION OBSERVER PANEL

All procedures prescribed herein shall be carried out in full view of the public insofar as feasible. In addition, the responsible election official shall devise a plan whereby all critical procedures of the vote tallying process are open to observation by an Election Observer Panel. Representatives of the qualified political parties and representatives of the news media may be among those invited to serve on this panel and shall be given the opportunity to observe that the correct procedures are followed in the receiving, processing, and tallying of all voted ballots.

6.4 LOGIC AND ACCURACY CERTIFICATION

A Logic and Accuracy Board shall be appointed by the responsible Election Official and, insofar as is practicable, shall be comprised of the same persons prior to, during, and after the election. The Board shall:

- Observe the performance and verify results of all required tests.
- Note any discrepancies and problems and affirm their resolution or correction.
- Deliver into the custody of the Election Official all required test materials and printed output.
- Certify to the performance of each of these duties as well as those otherwise established by the procedures; provided that all members of the Board shall sign the appropriate certificate or certificates.

Final Pre-Election certification shall be made to the Secretary of State no less than seven days before each statewide election. This certification shall be made by the responsible Election Official based on the Logic and Accuracy Board's certification of successful testing. In the event an amendment to the Ballot Tabulation program is required following this certification, the Election Official must immediately re-certify to the Secretary of State.

A copy of a sample certificate is attached to these procedures as *Appendix E.1: Certification by Logic and Accuracy Board*.

6.5 LOGIC AND ACCURACY BOARD

The Election Official shall establish a Logic and Accuracy Board to complete certification of testing. Not later than seven (7) days before each statewide election, the Secretary of State must receive a copy of the Logic and Accuracy Board's certification. For local and district elections, the Logic and Accuracy Board members shall submit their copy of the Logic and Accuracy Board's certification to the Local Election Official conducting the election.

The Logic and Accuracy Board shall be comprised of the same persons prior to, during, and after the election. The Logic and Accuracy Board shall have the following duties.

- Receive from the Election Official all required test materials and take steps to ensure the security of said materials prior to, during, and after the election, except when the materials are properly in the possession of one of the other boards or Election Officials as required by these procedures.
- Verify the correctness of the logic and accuracy test materials and results. This verification shall also be required for any of such material which must be replaced.
- Observe the performance and verify results of all required tests.
- Note any discrepancies and problems and affirm their resolution or correction.
- Deliver into the custody of the Election Official all required test materials and printed output.
- Certify to the performance of each of the above-prescribed duties as well as those otherwise established by the procedures; provide that all members of the Board shall sign the appropriate certificate or certificates.

6.6 SUBMITTAL OF BALLOT TABULATION PROGRAMS TO SECRETARY OF STATE

Ballot tabulation programs for statewide elections are to be deposited with the Secretary of State no later than seven (7) days prior to each statewide election. Ballot tabulation programs must be accompanied by the Election Official's certification of testing, the list of Ballot Tabulation equipment used and a notification that he/she has caused the Optech Insight to be programmed in conformity with the ballot processing regulations as set forth herein. Refer to the California Elections Code. Should changes be required following certification and submission to the Secretary of State, resubmission and recertification is required.

6.7 ELECTION NIGHT AND POST-ELECTION REPORTING

Any delays in election night's semi-official canvass reporting due to hardware, software, environmental, or human causes which result in failure to report results to the Secretary of State at least every two (2) hours shall be reported to her or him by the 28th day following the election. The responsible Election Official may also report other delays in the processing of ballots as he or she deems appropriate.

6.8 PREPARATION OF SPECIFIC WRITTEN PROCEDURES

Each Election Official shall prepare specific written procedures for each phase, step and procedure in the preparation, operation of Polling Places, Ballot Tabulation and Official Canvasses of elections. Written procedures must also include instructions to precinct officials regarding proper handling of Absentee and Provisional Ballots as well as a description of procedures used to manually recount ballots pursuant to the California Elections Code.

These procedures must be prepared and submitted to the Elections Division of the Secretary of State's Office. Upon submission, the election jurisdiction's procedures shall be reviewed for compliance with state procedures, and the Election Official shall be advised of any necessary revisions.

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7 System Security

This chapter defines the following System Security for the Optech Insight:

- General Access Control Policy
- Individual Access Privileges
- Access Control Measures
- Equipment and Data Security
- Software and Firmware Installation
- Other Elements of an Effective Security Program

7.1 GENERAL ACCESS CONTROL POLICY

This sub-chapter defines the General Access Control Policy.

Security is a blanket term which involves a variety of elements designed to mitigate potential risks and threats. In general, secure systems will control, through use of specific features, access to information such that only properly authorized individuals, or processes operating on their behalf, will have access to read, write, create, or delete information.

The design of a secure environment involves the use of three types of *controls*:

- Preventive Controls
- Detective Controls
- Corrective Controls

The security of any system, organization, or environment is NOT the result of merely one or two system components. It is the result of a variety of features, controls, architectural decisions, and procedures combining and building upon each other to produce a *security infrastructure*.

Security is fundamental to the election process. Security implies that the system must be reliable, it must accurately record votes and it must maintain the integrity of those votes. Security is achieved through features and controls which are inherent in the system design and through administrative controls. The acceptable level of security cannot be achieved with just one. Both types of controls must be present. This document is an overview of the security features and controls in the design of the Optech Insight.

7.1.1 PREVENTIVE CONTROLS

The purpose of this type of control is to PREVENT the occurrence of one or more specific risks or threats. These controls can be used as a means of restricting or limiting access to data, functionality, or components. They may also be used to directly interdict potential threats or outside attack.

7.1.2 DETECTIVE CONTROLS

ALL risks, threats, or attacks cannot be prevented — e.g., a system which permits outside dial-up access can use preventative control to stop unauthorized access, but it cannot prevent recurring attempts. In these cases, it is important to at least detect or record that such an event occurred. Detective controls are intended to identify real, potential, or attempted breaches in security. They are also often used to record an audit trail of activity which can be subsequently examined to identify potential problems or risks.

7.1.3 CORRECTIVE CONTROLS

Even with preventative and detective controls in place, it is possible that damage or loss could occur (e.g., an authorized person uses such authorization to damage the system). Corrective controls are procedures or mechanisms which enable recovery from the loss or damage.

7.2 INDIVIDUAL ACCESS PRIVILEGES

This sub-chapter defines the Individual Access Privileges.

7.2.1 CONTROLLED ACCESS

- Optech Eagle operators should have controlled access to the keys that lock the Optech Eagle.
- An official of the Central Counting Location should have keys available to use for inserting storage media during backup.
- Measures should be taken to prevent unauthorized operating system access to the Optech Eagle, and to other machines on an Optech Eagle network, if any. This is especially important if the room cannot be fully secured.
- At least two persons in the county shall have administrator level access to the Optech Eagle.

7.2.2 PASSWORDS

- Windows passwords should be used to protect against unauthorized entry into the system.
- Passwords shall, to the extent practicable, meet or exceed best practices for strong passwords.
- Passwords should be used for Optech Eagle software, to secure the Optech Eagle.
- Passwords must be changed before every election.
- Passwords and login IDs may not be used by anyone other than the individuals to whom they have been issued.
- A user should immediately change a password, if the password is suspected or known to be disclosed to an unauthorized party.

7.3 ACCESS CONTROL MEASURES

This sub-chapter provides the following Access Control Measures for the Optech Insight.

- Optech Insight operators should have controlled access to the Optech Insight. In some cases, this may include controlled access to the keys that lock the Optech Insight.
- Measures should be taken to prevent unauthorized operating system access to the Optech Insight. This is especially important if the room cannot be fully secured.
- At least two persons in the county shall have administrator level access to the Optech Insight.

The Optech Insight is constructed with locks to prevent unauthorized access to the following:

- Ballot Tabulator
- Ballot Bins
- Interface electronics

The Optech Insight also has controls to ensure that accidents, inadvertent mistakes, and errors are minimized. This control sequence provides protection against intentional, fraudulent manipulation, and malicious mischief by supplying a means to identify fraudulent or erroneous changes to the system. Access protection schemes, validation routines, self-diagnostics, and error recovery routines, and restart and logging capabilities are incorporated to protect vital parts and operating states.

Unauthorized operations by users will be detected and show on the event log tape. This should be maintained in one continuous roll from the start of the election setup process until the final audit.

7.3.1 PRE-ELECTION PROCESSING

1. The EMS database (precincts, districts, contests, candidates, Ballot Styles, etc.) is prepared by using the EMS election coding system. The EMS database includes Election Parameter data for configuring individual Optech Insight units and also an accumulation and reporting database for use by the AERO accumulation system (once the Precinct Totals have been transported to the Central Counting Location).

The EMS election coding system has a nominal password protection system to prevent unauthorized users from making changes to the EMS database. However, since the Election Coding process usually occurs over a period of weeks, and the EMS election coding system with password enable can be left unattended, more conventional security procedures should be utilized. It is recommended that the EMS election coding system be located in a relatively secure office, and on a PC that is not connected to a network. The various EMS reports should be generated and reviewed. The reports for Contests & Candidates and Ballot Styles are especially recommended. For greater security, the EMS activity system log can be periodically printed and reviewed for unauthorized access. Periodic backups should be made and saved for possible future auditing review or restoration

2. The individual Optech Insight MemoryPacks are loaded (“burned”) with the appropriate precinct Election Parameter data using the MPR (MemoryPack Receiver).

Care must be exercised by the jurisdiction to ensure that as precinct data is burned into MemoryPacks for each precinct, an appropriate label is affixed to each MemoryPack correctly identifying the precinct where the MemoryPack is to be used.

3. The MemoryPacks are inserted into Optech Insight units and initialized.

The variable RAM portion of MemoryPacks contain a number of checksums for the various data sections. When the MPR is used to new precinct Election Parameter data is programmed (burned) into the flash RAM portion of the MemoryPack, the checksum for the Election Parameter data is no longer compatible. Therefore, when a MemoryPack with newly burned Election Parameter data is inserted into an Optech Insight unit and the unit powered on, the result will be a message ‘checksum error in EMS parameter data, do you wish to initialize?’ The usual response will be ‘yes’ which will cause the old vote totals to be cleared to zero and new checksums to be generated for all data sections including the new precinct Election Parameter data. Ballot processing can then proceed. An alternate response is to power off the unit, remove the MemoryPack and re-burn the MemoryPack with the old original Election Parameter data, thereby making the checksum valid again. In any case, there is no way to process ballots, print reports, or transmit results with the combination of the old vote totals and the new Election Parameter data.

4. Test ballot decks are read into the units and vote total reports generated and reviewed to verify the accuracy of the Election Parameter data in the MemoryPacks and the accuracy of the units to properly read ballots.

This is a very critical procedure to assure accurate ballot processing. The test decks must include votes for every candidate position and should result in a recognizable pattern of votes that is different for adjacent positions in each contest.

5. The MemoryPacks are removed from the units, and the vote totals in the MemoryPacks are read into the AERO accumulation system using the MPR. Reports are generated and reviewed for the accumulated test results.

This is a very critical procedure to assure accurate ballot processing. This step is absolutely critical for those jurisdictions that do not perform the previous review step with appropriate thoroughness.

6. The MemoryPacks are returned to the units, the vote totals are cleared to zero, and the zero ballots cast report is left in the unit showing the precinct number in the MemoryPack and the fact that the MemoryPack vote results are zero.

The label on the MemoryPack is not visible when the MemoryPack is inside the unit. Therefore, the presence of the 'zeroed' report showing the precinct number as well as zero ballots is very important in verifying that the appropriate unit is delivered to the appropriate precinct.

7. The Optech Insight units and MemoryPacks are locked and sealed, and are transported to the Polling Places.

Locks are implemented for the Ballot Box, and the Optech Insight door containing the Keypad and the MemoryPack. Various seal options exist including (and especially recommended) one for the MemoryPack.

7.3.2 ELECTION DAY PROCESSING

1. On election morning the Poll Workers plug in the unit and a full zero report is automatically printed.

The contest and candidate report will be automatically generated only if ballots cast is zero.

2. The Poll Workers verify that the precinct number on the report is correct for their precinct, and that the offices and candidates on the report match the ballots provided to them.

The report should be reviewed to verify that the precinct number is correct and that the contests and candidates match the ballots provided to the precinct. If not, or if an error message prints or if ballots cast is not zero, then the Central Counting Location must be notified. (Again, the contest and candidate report will be automatically generated only if ballots cast is zero.)

3. After the official poll opening time, voters are allowed to vote (mark their ballots) and insert their ballots into the Optech Insight unit where they are tabulated and the Precinct Totals in the MemoryPack updated.

The vote totals are check summed immediately before and immediately after each ballot is read and processed. Any error condition generates the immediate printing of an error message and the insertion of a corresponding entry in the Electronic Log. If AC power is lost and then restored, all checksums are verified and a ballot report is printed showing the number of ballots cast, but no vote totals. Ballot processing can then continue.

4. After the official poll closing time, and when all Voters have voted, the Poll Workers close the polls and generate the Totals Reports, per the *Optech Insight Operators Manual*.

To close the polls and print the Totals Reports, the Poll Worker must press the **[Print Totals]** key on the Keypad, and then confirm the operation by pressing another key.

To access the Keypad and close the polls, the Election Official must unlock the access door to the compartment at the rear of the Optech Insight.

5. The Poll Workers then remove the MemoryPack and send it by official courier to the Central Counting Location.

The locked compartment with the Keypad also contains the MemoryPack®. In addition to being locked, the MemoryPack may be 'sealed', an option that is strongly recommended so that to remove the MemoryPack the Election Official must also cut the seal and (hopefully) record the seal number for a subsequent audit.

6. At the accumulation site the MemoryPack vote totals are read into the AERO accumulation and system using the MPR.

The AERO accumulation system reads the vote totals from the MemoryPack and verifies the checksum, that the creation date & time of the precinct Election Parameter data is appropriate, and that the MemoryPack data has not been processed before.

7. As the AERO database is updated with MemoryPack results, via the MPR, vote total reports are generated.

In addition to vote total summary reports, other reports may be generated such as precincts counted and not counted reports.

8. In addition, a copy of the vote totals database can be copied onto diskette or ZIP disk. The copy is in a flat ASCII file format that can be read and processed by the customer's software to produce customized reports, web pages, and auditorium video displays.

It is recommended that the accumulation system not be part of a larger networked system, or have an Internet or other outside connection. By transferring a copy of the current vote totals database to a removable disk and hand carrying the disk to another system for web display, etc., there can be no risk of outside tampering with the real database.

Like the EMS election coding system, the AERO accumulation system has a nominal password protection system to prevent unauthorized users from making changes to the database. However, it is recommended that the AERO system be located in a relatively secure office, and on a PC that is not connected to a network. The various AERO reports should be reviewed as they are generated. For greater security, the AERO activity system log can be periodically printed and reviewed for unauthorized access. Periodic backups should be made and saved for possible future auditing review or restoration.

7.3.3 POST-ELECTION PROCESSING

Once the ballot container and required data have been transported to the Central Counting Location, the AERO accumulation system is used to perform the following Post-Election Processing,

1. In the days following the election, the remaining absentee ballots are processed, as are any provisional and un-tabulated ballots.

During this period various audit reviews should also be performed. Manual recounts should be made of a portion of the precincts for a portion of the contests.

2. When all ballots have been processed, the final reports are generated including the summary report, individual precinct reports, and the canvass report.

Review the audit reports again. Recount some more precincts. Review the Optech Insight 'ballot statistics' report for variations from precinct to precinct on error ballots, returned ballots, overridden ballots, Blank Ballots, etc. Some marginal Optech Insight units may need servicing, some Poll Workers may need special training, some ballots may have been marginal. Review all procedures while the election is still recent.

7.4 EQUIPMENT AND DATA SECURITY

This sub-chapter defines the following Equipment and Data Security for the Optech Insight:

- General Equipment and Data Security
- Physical Security
- Ballot Box
- Optech Insight
- Destructible Seals
- Seal and Container Inspection
- Storage
- Checksum Security
- MemoryPack
- Date/Time Stamp
- Proprietary Designs
- Electronic Log Report

The Local Election Official has management control over all resources employed during the voting and Ballot Tabulation/Vote Tally process until the control is voluntarily relinquished when no longer needed.

If it becomes necessary to transfer control of any equipment back to the vendor for repairs, operational elections activity may not be carried out on the equipment while it is under the vendor's control.

The Optech Insight cannot operate as a Precinct Tabulator without a MemoryPack.

MemoryPack removal is protected by the rear door lock and by an election seal. An interlock switch allows the system to detect and log the opening of the MemoryPack compartment on the Electronic Log Report, per the *Optech Insight Operators Manual*. This audit log prints continuously to record all activity other than casting a ballot. All error and major events are noted with the date and time from the real-time clock.

7.4.1 GENERAL EQUIPMENT AND DATA SECURITY

- The Optech Eagle should NEVER be connected to the World Wide Web.

7.4.2 PHYSICAL SECURITY

Physical security is stressed in each installation, as follows:

- The Optech Insight should remain in a controlled, preferably locked area, with access limited to authorized staff.
- The Optech Insight should not be left unattended without first activating one or more levels of password protection.
- The Optech Insight should be locked up between elections.
- The Optech Insight should be dedicated to election use.
- The Optech Insight should be locked to provide security against unauthorized entry.
- The master installation disk should also be locked up to prevent unauthorized changes.
- Controlled test elections should be run before and after each election to certify accuracy of processing.

7.4.3 **BALLOT BOX**

Restricting access to the Ballot Box is accomplished by two locks to secure the door. The flap over the ballot entrance holes has a lock and provision for a seal. The Optech Insight may be secured to the Ballot Box with locking provision internally in the Optech Insight.

7.4.4 **OPTECH INSIGHT**

The Optech Insight has two locks that are keyed differently. Keys for accessing the door cannot be easily “duplicated.”

The Rear Access Lid Lock prevents opening of the case, which allows access to the circuitry inside the machine. The Key to this lock is intended to be under the control of the election administrative officials.

The Maintenance Technician can enter a four-digit Access Code on the Keypad to run internal diagnostic and maintenance routines. These are not needed by the Poll Worker and should be restricted to just Maintenance Technicians and Administrative personnel. The Access Code may be changed for each election. Maintenance Technicians will have full access to the Optech Insight keys and Access Codes, and should never serve as Poll Workers.

The second lock prevents opening of the rear door, which controls access to the Keypad, Power Cord, printer paper roll, and (by breaking a seal) the MemoryPack. The key to this lock is intended to be part of the Poll Worker kit. While the rear door is locked, access to the Keypad is limited to one button, which allows the Poll Worker to override the ballot rejection feature. For Closing the Polls or performing any other Keypad-controlled function, the Keypad must be accessed by opening the rear door with a key.

For the Poll Worker:

- Only the **[Print Totals]** and the **[Paper Feed]** keys are needed to initiate actions during the election.
- The **[0]** or **[9]** keys are used to confirm the closing of the polls.
- If the Overridden Error Ballot option is selected, during Election Coding (by using the EMS election coding system), The **[3]** Override Error Ballot key can be pressed with the cover closed, through a narrow hole that restricts access to other Keypad numbers.

No other Keypad control sequences use combinations near the **[3]** key.

7.4.5 **DESTRUCTIBLE SEALS**

A Destructible Seal is any type of numbered device, such as a boxcar seal, used to close a container, room, or area, which requires damage to or destruction of the device to gain access to the contents therein. Audit trail logs must be maintained recording the sealing, including the seal number, the date and time, and the person's name, as well as the unsealing, including the seal number, the date and time, and the person's name

- Seals must be used on the programmed MemoryPack, once it has been inserted into the Optech Insight.
- Seals must be used on ALL voted Ballot Bins, per *paragraph 7.4.4: Seal and Container Inspection*.
- Audit trail logs must be maintained recording the sealing, including the seal number, the date and time, and the person's name, as well as the unsealing, including the seal number, the date and time, and the person's name.

Audit trail logs must be maintained recording the sealing, as follows:

- Sealing:
 - Seal Number
 - Date and Time
 - Person's Name
- Unsealing:
 - Seal number
 - Data and Time
 - Person's Name

7.4.6 SEAL AND CONTAINER INSPECTION

1. Examine each sealed voted Ballot Bin, paying particular attention to the condition of the container and seal.
2. Note and initial on a control document the precinct number of Ballot Bins with broken or improperly secured seals.
3. Refer any defects to the appropriate board or to the Election Official as directed.
4. Forward properly sealed Ballot Bins for ballot inspection.

7.4.7 STORAGE

- House units in an access-controlled area.
- Keep all spare parts locked up at all times.
- Limit access to units, spare parts, etc. as much as possible.
- Perform a full inspection of each unit, including validating the firmware version, before election use.

7.4.8 CHECKSUM SECURITY

There are several sections of memory in the Optech Insight that are check summed including the following:

- APX and HPX programs
- Election Parameter data
- Vote and statistical totals

The primary purpose for the implementation of these checksums is to verify that the data contained in them is not corrupted by hardware or software errors.

7.4.9 MEMORYPACK

If the MemoryPack door is opened while the Optech Insight is still powered ON:

- Standard Optech Insight operation is immediately halted.
- An error sound is generated.
- A message is displayed directing the Operator to close the door.
- If the door is closed, the Optech Insight returns to its normal operating mode.

If the MemoryPack is removed:

- Optech Insight operation halts.
- The unit has to be restarted from power-on to ensure no illegal tampering was done to the MemoryPack or its contents.

The above conditions are also logged in the Electronic Log for future review.

Since the MemoryPack memory is maintained by battery, in the event of a hardware failure of an Optech Insight unit, the unit can be replaced, the MemoryPack moved from the old to the new unit, and ballot processing continued with no loss of data or continuity.

When AC power is removed from the Optech Insight, either deliberately or in the event of a power failure, a power fail interrupt occurs and all CPU register contents are saved so that processing may be properly resumed when power is subsequently restored. This precise resumption process is only implemented if power was lost in the middle of processing a ballot. Power loss at other times is not critical and standard start-up procedures are used.

7.4.10 DATE/TIME STAMP

The Election Parameter data in the MemoryPack contain the date and time when the system database was created by using the EMS election coding system. This date-time stamp is printed on the following reports:

- System Start-Up Report
- Zero Ballot Report
- Allowable Header Codes Report
- Zero Vote Totals Report
- Electronic Log Report
- Results Ballot Report

It is posted to the AERO accumulation system reading the results, so that it can verify that the MemoryPack contains the final official Election Parameter data and not, for example, an earlier test version.

7.4.11 PROPRIETARY DESIGNS

The Optech Insight uses a proprietary CPU board, based on an 8 Megahertz Z-80 microprocessor and standard peripheral devices.

7.4.12 ELECTRONIC LOG REPORT

With the exception of the reading and processing of a Regular Ballot, all significant events are logged in the following two ways:

First, there is an immediate printed record of the event.

Secondly, the event is logged in the Electronic Log, which may be printed out at any time, as an Electronic Log Report, to show all significant events since the election was initialized.

7.5 SOFTWARE AND FIRMWARE INSTALLATION

This sub-chapter defines the security requirements for Software Installation for the Optech Insight.

Physical security is stressed in each installation, as follows:

- The Optech Insight should remain in a controlled, preferably locked area, with access limited to authorized staff.
- The Optech Insight should not be left unattended without first activating one or more levels of password protection.
- The Optech Insight should be locked up between elections.
- The Optech Insight should be dedicated to election use.
- The Optech Insight should be locked to provide security against unauthorized entry.
- The master installation disk should also be locked up to prevent unauthorized changes.
- Controlled test elections should be run before and after each election to certify accuracy of processing.

All Optech Insight Software and Firmware are installed at the factory except for election-specific information that is programmable using EMS/AERO for use with each election and loaded onto the non-volatile memory in the MemoryPack.

The Optech Insight provides data and code checks at start-up to verify that the correct versions of programs and data are in use. The firmware tests the match between the tabulator and MemoryPack halves of the control program and shuts down if they do not match. The version number and date of each is printed at the top of the Electronic Log Report.

7.6 OTHER ELEMENTS OF AN EFFECTIVE SECURITY PROGRAM

This sub-chapter describes the following Other Elements of an Effective Security Program for the Optech Insight:

- Protection Against Malicious Software
- EMS Database Security
- Poll Workers, Voting Hours
- Poll Workers, Closing the Polls
- Maintenance Technicians
- Guideline for Security Policies and Methods

7.6.1 PROTECTION AGAINST MALICIOUS SOFTWARE

This paragraph provides a description of Protection Against Malicious Software for the Optech Insight.

The Election Official shall ensure the protection of the Ballot Tabulation process from intentional and/or fraudulent manipulation, malicious mischief, accidents, and errors, as follows:

- Establish procedures to identify changes to the Ballot Tabulation/Vote Tally system, including dates and times that files are created, modified, or accessed, and by whom. These procedures must also include a checklist and sign-off requirement for Logic Testing.
- Establish procedures for the physical protection of facilities, and data and communications access controls; including intrusion and fire alarms, temperature and humidity sensors, etc .
The procedures shall also include provisions for locked facilities for computers which are dedicated discretely to elections as well as for voted and non-voted ballots and tabulated and un-tabulated ballots. Such procedures shall not preclude the accessibility of the Optech Insight nor computers for purposes of testing, repair, demonstration, training or for other purposes, which are deemed justifiable by the Election Official.
- Establish contingency plans for Ballot Tabulation/Vote Tally, including either backup Ballot Tabulation/Vote Tally facilities under the Election Officials supervision, or the availability of such facilities from another jurisdiction, or from a vendor, or from another source. Such plans may take note of the existence of multiple units, if such is the case, citing these situations as adequate backup.
- Establish procedures for internal security, i.e., the protection of Ballot Tabulation/Vote Tally hardware, firmware, and software from fraudulent manipulation by persons within the elections office.

These procedures must provide for:

- o Restricted access to Ballot Tabulation/Vote Tally hardware, firmware, and software
- o Individual passwords which must be complex and frequently changed
- o Physical protection of all non-voted precinct and Absentee Ballots, as well as of all tabulated and un-tabulated ballots, by use of logs to chronicle their quantity, use, and access before and after the election.

7.6.2 EMS DATABASE SECURITY

- Backup copies of the EMS Database shall be made and secured in a location separate from the working copies by the Local Election Official after completion of Pre-Election LAT:
 - For as long after the election as required by law
 - By order of a court or directive of the Secretary of State

7.6.3 POLL WORKERS, VOTING HOURS

During voting hours, the Keypad keys are not accessible to the Poll Workers or voters because they are in a locked compartment. The only exception to this is the [3] Override Error Ballot key, which is accessible at the rear of the unit. The function of the [3] Override Error Ballot key is to override (accept) ballots that have been returned to the voter due to read errors, over voting, etc. The [3] Override Error Ballot key is also used to override the optional time check and force acceptance of the ballots before the official poll opening time. All uses of the [3] Override Error Ballot key are logged for audit trail review.

7.6.4 POLL WORKERS, CLOSING THE POLLS

When the decision is made to close the polls, the following operations are performed by the Poll Worker:

1. Use the Southco Key to unlock the Rear Access Lid Lock.
2. Use the Red Key to open the Rear Access Lid.
3. Unseal the compartment containing the Keypad, thus making all 12 Keypad keys accessible.
4. Press the [Print Totals] key to initiate the Closing the Polls function.
5. Press the [0] and [9] keys to confirm or not confirm the decision to close the polls.

If confirmed, the following occurs:

- The polls are closed.
- The Results Vote Totals report is printed, per the *Optech Insight Operators Manual*.
- Further ballot reading is disabled.
- The Optech Insight has a security lockout program that prevents a return to operation.

7.6.5 MAINTENANCE TECHNICIANS

There are number of functions that technical personnel have to perform that Poll Workers should not be allowed to perform. These functions may include:

- Initializing the election.
- High volume test ballot auto reading
- Auto return of all test ballots
- Re-opening the polls to read additional ballots.
- Zeroing vote totals.
- Hardware diagnostic functions.
- Other system test functions.

The special functions above can only be initiated after using the Keypad to enter a 4-digit Access Code. The standard Access Code for SVS test elections is [5], [6], [5], [7] entered sequentially. The selection of the specific Access Code for an election is done via EMS during Election Coding. Therefore, each jurisdiction can select its own private Access Code from election to election in order to more effectively restrict the knowledge of the specific code.

7.6.6 GUIDELINE FOR SECURITY POLICIES AND METHODS

Each jurisdiction must analyze the potential threats to their election security. The following is only a guideline.

7.6.6.1 SECURITY POLICY

- What constitutes a breach of security?
- How could that security be breached?
- If collusion is involved, how many individuals would be required?
- Would it be detected?
- Could the Election Totals be recovered without error?
- How much is your jurisdiction willing to spend to improve security?
- What needs to be protected?
 - Un-voted ballots
 - Registration records
 - Equipment
 - Election seals
 - Data transmission equipment
 - Election Coding system
 - Central Counting Location
 - Voted ballots
 - Other

7.6.6.2 SECURITY METHODS**Personnel Security:**

- Screening personnel
- Identification of personnel
- Badges

Equipment Security:

- MemoryPacks
- Optech Insights

Ballot Security:

- Printing
- Storage
- Transport
- Ballot-issuing procedures

Physical Security:

- Access Limits
- Access Codes
- Key Control

Election Testing:

- Test records
- Test ballots

Election Audit:

- Procedures
- Ballot accountability
- Automatic recounts

Prosecution:

- Irregularities are reported to the proper authorities
- Security versus the public right to know

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Appendix A: Glossary

This appendix provides a listing and brief definition of all terms for the Optech Insight that may be unfamiliar to persons not trained in either voting systems or computer operation.

Absentee Ballot	FEC definition: Ballot cast by a Voter unable to vote in person at their Polling Place on Election Day.
Accuracy Testing	Consists of entering a known number of ballots with a known number of voted response positions into the product being tested.
Accuracy Tests	Tests, which verify that the Vote Tallying hardware is operating correctly
Audit Trail	The ability to trace to the original source of data any input record or process performed on a voting system.
Auxiliary Bin	Ballot Bin where ballots will be placed, for later processing, if the Optech Insight becomes inoperable during the polling hours and will no longer accept ballots. May also be used to hold exception/error ballots for review after Closing the Polls.
Backup	Equipment and procedures available in the event of failure of the voting system. Backup is a critical factor in voting system integrity.
Ballot	The printed document which provides a Voter the opportunity to vote for all appropriate candidates and ballot measures by using an appropriate Marking Device to indicate selections in available voting positions. The ballot shall have two detachable serialized stubs.
Ballot Box	Ballot Box, where tabulated ballots are automatically deposited in the following Ballot Bins: <u>Rear Bin</u> : Holds fully tabulated ballots that require no further action. <u>Center Bin</u> : Holds all processed ballots that have one or more offices with a Write-In position voted. <u>Auxiliary Bin</u> : Holds ballots, for later processing, if the Optech Insight becomes inoperable during the polling hours and will no longer accept ballots. (Ballots are manually deposited in this Ballot Bin.)
Ballot Definition	Data structures and text that describe the ballot.
Ballot Definition Subsystem	Includes all hardware, software, and manual procedures required to accomplish the following: <u>Administrative</u> <u>Candidate and Contest</u> <u>Voter Registration Databases</u> <u>Ballot Generation</u> <u>Election Programming</u> <u>Ballot Printing/Display</u> <u>Ballot Validation.</u>

Ballot Dispositions:	Ballot dispositions, for a voting system, are as follows: <ul style="list-style-type: none"><u>Regular Ballot</u><u>Blank Ballot</u><u>Unvoted Major Office Ballot (Option)</u><u>Overvoted Ballot</u><u>Undervoted Ballot</u><u>Write-In Ballot</u><u>Cross-Voted Ballot</u><u>Error Ballot</u><u>Unprocessable Ballot</u><u>Overridden Error Ballot (Option)</u>
Ballot Statement	<p>Statement containing data pertinent to the ballot count that must be completed at the close of polls and is placed inside envelope #4.</p> <p>A comparison of the number of ballots received from the Election Official by each precinct board with the sum of all of the following ballots from an election:</p> <ul style="list-style-type: none"><u>Precinct Ballots</u><u>Returned Absentee Ballots</u><u>Provisional Ballots</u><u>Spoiled and Unused Ballots</u>
Ballot Tabulation	Process of totaling votes.
Ballot Write-In Voting Position	For each office on the ballot, immediately below the space on which the last candidate's name is printed/displayed, the space or spaces available for the Voter to cast Write-In votes when required.
Blank Ballot	A ballot on which there are no voting position marks that can be read by the voting system. It may be truly blank in all voting positions, or it may have marks in these positions, which the voting system cannot read because they are of insufficient density.
Candidate	Person, question response, or Write-In selector that a Voter may select.
Center Bin	Ballot Bin, which holds all processed ballots that have one or more offices with a Write-In position voted. Write-In ballots are automatically segregated.
Closing the Polls	Election Day sub-phase, which provides a means for preventing the further tabulation of ballots once the Polling Place has closed.
Contest	Race for elected office between candidates or parties. Question, proposal, or amendment.

Control Subsystem	<p>Consists of the physical devices and software that accomplish and validate the following:</p> <ul style="list-style-type: none"><u>Equipment Preparation</u><u>Pre-Delivery Testing</u><u>Polling Place Testing</u><u>Opening the Polling Place</u><u>Enabling a Ballot</u><u>Error Recovery</u><u>Closing the Polling Place</u><u>Generating Polling Place Reports</u>
Conversion Subsystem	<p>Contains all mechanical, electromechanical and electronic devices required to read and translate ballot card pattern marks into electronic signals for processing and performs ballot handling and ballot reading.</p>
Cross-Voted Ballot	<p>Ballot with votes for more than one party in an Open Primary election.</p>
Cumulative Voting	<p>FEC definition: Practice where Voters are permitted to cast as many votes as there are seats to be filled. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidates.</p>
Destructible Seal	<p>Any type of numbered device, such as a boxcar seal, used to close a container, room, or area, which requires damage to or destruction of the device to gain access to the contents therein. Audit trail logs must be maintained recording the sealing, including the seal number, the date and time, and the person's name, as well as the unsealing, including the seal number, the date and time, and the person's name.</p>
Election	<p>Process of creating a ballot, printing it, verifying it, and running the election, including registering the votes of the Voters.</p>
Election Coding	<p>Process by which Election Officials or their designees use voting system software to logically define the ballot for a specific election.</p>
Election Day	<p>Election phase, which allows for official ballots to be cast, during the Official Election. Includes all activities occurring during the following sub-phases:</p> <ul style="list-style-type: none"><u>Opening the Polls</u><u>Official Election</u><u>Closing the Polls</u>
Election Official	<p>(EO): Applies to the County Clerk, the County Registrar of Voters, the City Clerk or any other person who has been properly and legally charged with the responsibility of conducting the election. They may deputize others to perform functions.</p>
Error Ballot	<p>Ballot which causes the voting system to determine the ballot as unreadable for any of the following reasons:</p> <ul style="list-style-type: none"><u>Is missing a necessary printed element</u><u>Contains some extraneous mark</u><u>Is torn</u>

Green Key	Key that is used to lock/unlock the Ballot Box.
Header Code	<p>Code used to identify:</p> <p><u>Ballot Style</u> <u>Split Precinct</u> <u>Political Party</u> <u>Precinct</u></p> <p>Header Codes are placed on the top front of the ballot.</p>
Local Election Official	(LEO): The individual or officer of a local governmental unit responsible for certifying candidates and issues to be placed on the ballot.
Logic Tests	Tests which must be run both before and after processing official ballots for an election. The logic test group of ballots has predetermined totals for all contests on the ballot, with every candidate in a contest receiving a different number of votes than any other candidate in that contest.
Marking Device	No. 2 lead pencil or other device, used by the Voter to mark the ballot, which will make a mark complying with reflectivity variance specifications as published by the manufacturer of the voting system.
MemoryPack	<p>Solid-state portable cartridge, which is used as follows:</p> <p><u>By the MPR</u>: To burn election data onto it, from WinEDS/EMS (Election Management Software), to be used during the election</p> <p><u>By an Optech Eagle/Insight</u>: For tabulating ballots</p>
Non-Partisan Offices	(SPEC): FEC definition: Elected offices for which candidates run independent of political party affiliation.
Official Election	Election Day sub-phase, when Voters cast official ballots for their candidate choices.
Open Primary	(OPRI): FEC definition: Primary Election in which Voters, regardless of political affiliation, may choose in which party's Primary Election they will vote. Some states require Voters to publicly declare their choice of party ballot at the Polling Place, after which the Poll Worker provides or activates the appropriate ballot. Other states allow the Voters to make their choice of party ballot within the privacy of the voting booth. Voters also are permitted to vote on Non-Partisan Offices and ballot issues that are presented at the same election.
Opening the Polls	Election Day sub-phase, which allows for Opening the Polls, for the Official Election sub-phase.
Overridden Error Ballot	Unprocessable or Error Ballot, which is returned to the Voter, and then overridden.
Overvoted Ballot	Ballot, where the Voter has voted for more than the allotted number of candidates for the office being contested. These ballots are returned to the Voter.

Partisan Offices	FEC definition: Elected offices for which candidates run as representatives of a political party.
Post-Election	Election phase, which includes all activities occurring after Closing the Polls.
Pre-Election	Election phase, which includes all activities occurring before Opening the Polls.
Pre-Election LAT	(Pre-Election Logic and Accuracy Tests): Pre-Election function, which includes mandatory Logic and Accuracy Test, which are performed during Pre-Election, for electronic verification and public oversight of ballot integrity.
Printer	System component that is used to produce reports of the Ballot Tabulation.
Processing Subsystem	Contains all mechanical, electromechanical, electronic devices and software required to perform the logical and numerical functions of interpreting the electronic image of the voted ballot, and assigns votes to the proper memory registers. Also, controls the operations of the conversion and reporting subsystems.
Protective Counter	Optical Scan function, which includes a counter that records all of the testing and election ballots read since the device was built.
Provisional Ballot	FEC definition: Ballot provided to individuals who claim they are eligible to vote but whose eligibility cannot be confirmed when they present themselves to vote. Once voted, such ballots are not included in the tabulation until after the Voter's eligibility is confirmed.
Provisional Voting	Voting Variation, which provides a ballot to individuals who claim they are eligible to vote but whose eligibility cannot be confirmed when they present themselves to vote. Once voted, such ballots are not included in the tabulation until after the Voter's eligibility is confirmed.
Public Counter	<p>FEC definition: Counter in a voting system that counts the ballots cast in a single election or election test.</p> <p>A counter on the front of the Optech Insight that displays the total number of ballots cast. This number includes all ballots accepted into the Optech Insight including not only Regular Ballots that have been tabulated, but also any error ballots that have not been tabulated but have been stacked into the Optech Insight for later manual processing. This counter is set to zero at the beginning of each election.</p>
Questioned Ballot	A ballot on which the Voter may be identified.
Rear Bin	Ballot Bin, which usually contains the larger quantity of ballots that have been completely counted and require no further action.

Recall Voting	FEC definition: Process that allows Voters to remove their elected representatives from office prior to the expiration of their terms of office. Often, the Recall involves not only the question of whether a particular Officer should be removed from office, but also the question of naming a successor in the event that there is an affirmative vote for the Recall. There are no provisions for the Recall of federal office holders.
Red Key	Key, which opens the Rear Access Lid, allowing access to the: <u>Keypad</u> <u>MemoryPack</u> <u>Printer Tape</u>
Regular Ballot	Ballot, which has been voted and is not distinguished by any anomaly, such as overvoted offices, damaged, blank, etc. Regular Ballots are customarily directed to the Rear Bin.
Reporting Subsystem	Contains all mechanical, electromechanical and electronic devices required to print audit record entries and results of tabulation and includes data storage media.
Rotation	<p>FEC definition: Process of varying the order of the candidate names within a given contest to reduce the impact of Voter bias toward the candidate(s) listed first. States that require Rotation may do so for Primary Elections, General Elections, or both. States may rotate the names according to a number of different formulas including by political subdivision, by election district, by precinct, or by ballot displays or voting systems.</p> <p>Each office may be declared as State-Level Rotation (Assembly District) or County-Level Rotation (Supervisory District).</p>
Secrecy Sleeve	An envelope or folder of such design and dimensions as to hide from view the Voted Ballot while it is being carried by the Voter from the voting booth to the stub removal station.
Southco Key	Key used to unlock the Rear Access Lid, allowing access to the following: <u>Keypad</u> <u>MemoryPack</u> <u>Printer Tape</u>
Split Precinct	FEC definition: Precinct containing more than one ballot format in order to accommodate a contiguous geographic area served by the precinct that contains more than one election district.
Spoiled Ballot	Spoiled or defaced paper ballot that the Voter returns to an Election Officer and receives another ballot.
System Proofing	Procedure which verifies that all materials, files, and programs for an election are correctly prepared. This proofing is normally done in approximately two (2) weeks, during the period consisting of 40 days to approximately 14 days prior to Election Day. Accuracy and Logic tests are included in System Proofing.

Test Deck	Stack of vote-marked ballots which are not election-specific but which will generate predic table, patterned results. This deck is used for Accuracy Testing.
Testing	<p>Purpose is to:</p> <ul style="list-style-type: none"><u>Determine that the election coding is accurate.</u><u>Ensure public confidence.</u><u>Verify the Ballot Tabulation program on Election Day.</u>
Undervote	FEC definition: Practice of voting for less than the total number of election contests listed on the ballot, or of voting for less than the number of positions to be filled for a single office. (I.e. A person would undervote if a contest required the selection of 3 out of a given number of candidates, and the Voter chose only two candidates)
Undervoted Ballot	Ballot, where the Voter has voted for less than the total number of election contests listed on the ballot, or less than the number of positions to be filled for a single office.
Unprocessable Ballot	Ballot which cannot be processed because of invalid security code, etc.
Unused Ballots	Paper ballots that have not been voted.
Unvoted Major Office Ballot	A ballot on which there are no voting position marks for a major office. It may be truly blank in all voting positions, or it may have marks in these positions, which the voting system cannot read because they are of insufficient density.
Vote Data Management Subsystem	Encompasses the management, processing, and reporting of voting data, after it has been consolidated at the Polling Place, and includes hardware and software required to generate all output reports in the various formats required by the using jurisdiction.
Vote For	FEC definition: Ballot choice in which Voters are required to vote for a limited number of candidates for a single office from a larger field of candidates. For example, in an election for six open city council seats, Voters may be told that they can vote for six out of twelve candidates actually listed on the ballot.
Vote Recording Subsystem	<p>Consists of equipment and software required to record Voter choices.</p> <p>Consists of ballot card or sheets, Marking Devices, Ballot Boxes, and ballot transfer boxes (to the Central Counting Location).</p>
Voted Ballot	Ballot on which the Voter has marked to select a candidate or measure and cast their ballot.

Voting Variations

The following significant variations among the election laws of the 50 states with respect to permissible ballot contests, voting options, and the associated Ballot Tabulation logic:

Open Primary
Partisan Offices
Non-Partisan Offices
Write-In
Rotation
Split Precinct
Vote For
Recall Voting
Cumulative Voting
Provisional Voting

Write-In

FEC definition: Means to cast a vote for an individual not listed on the ballot. Voters may do this by using a Marking Device to physically write their choice on the ballot or they may use a Keypad, touchscreen or other electronic means to indicate their choice.

Write-In Ballot

A ballot where a vote has been cast in a race for a candidate whose name does not appear on the ballot.

Write-In Candidate

Optional candidate type used to provide a means to the Voter to “Write-In” in the name of a candidate whose name does not appear on the printed/displayed ballot.

Appendix B: Voting Variations

This appendix identifies the following Voting Variations, which are supported by the Optech Insight:

- Open Primary
- Partisan Offices
- Non-Partisan Offices
- Write-In
- Rotation
- Split Precinct
- Vote For
- Recall Voting
- Cumulative Voting
- Provisional Voting

B.1 OPEN PRIMARY

An Open Primary is a Primary Election in which Voters, regardless of political affiliation, may choose in which party's primary they will vote. Some states require Voters to publicly declare their choice of party ballot at the Polling Place, after which the Poll Worker provides or activates the appropriate ballot. Other states allow the Voters to make their choice of party ballot within the privacy of the voting booth. Voters also are permitted to vote on Non-Partisan Offices and ballot issues that are presented at the same election.

B.2 PARTISAN OFFICES

Partisan Offices are elected offices for which candidates run as representatives of a political party.

B.3 NON-PARTISAN OFFICES

Non-Partisan Offices are elected offices for which candidates run independent of political party affiliation.

NOTE: These are also known as Special Elections.

B.4 WRITE-IN

Write-In provides a means to cast a vote for an individual not listed on the ballot. Voters may do this by using a Keypad, touchscreen, or other electronic means to indicate their choice.

B.4.1 CURRENT CANDIDATES ONLY

Only candidates who run in the contest can get a Write-In vote.

B.4.2 FREE-FOR-ALL

Any Write-In vote counts.

B.5 ROTATION

Rotation is the process of varying the order of the candidate names within a given contest to reduce the impact of Voter bias toward the candidate(s) listed first. States that require Rotation may do so for Primary Elections, General Elections, or both. States may rotate the names according to a number of different formulas including by political subdivision, by election district, by precinct, or by ballot displays or voting machines.

NOTE: This is also known as Ballot Rotation.

Each office may be declared as:

- State-Level Rotation (Assembly District)
- County-Level Rotation (Supervisory District)

These different localities have different Rotation rules in California.

B.6 SPLIT PRECINCT

A Split Precinct is a precinct containing more than one ballot form in order to accommodate a contiguous geographical area served by a precinct that contains more than one election district.

B.7 VOTE FOR

Vote For provides a ballot choice in which Voters are required to vote for a limited number of candidates for a single office from a larger field of candidates. For example, in an election for six open city council seats, Voters may be told that they can vote for six out of twelve candidates actually listed on the ballot.

NOTE: This is also known as Vote for N of M.

B.8 RECALL VOTING

Recall Voting is the process that allows Voters to remove their elected representatives from office prior to the expiration of their terms of office. Often, the Recall involves not only the question of whether a particular officer should be removed from office, but also the question of naming a successor in the event that there is an affirmative vote for the Recall. There are no provisions for the Recall of federal office holders.

NOTE: This is also known as Recall Issues (with Options).

B.9 CUMULATIVE VOTING

Practice where Voters are permitted to cast as many votes as there are seats to be filled. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidates.

B.10 PROVISIONAL VOTING

Provisional Voting provides a ballot to individuals who claim they are eligible to vote but whose eligibility cannot be confirmed when they present themselves to vote. Once voted, such ballots are not included in the tabulation until after the Voter's eligibility is confirmed.

NOTE: This is also known as Challenged Ballots.

Appendix C: Ballot Disposition

The following are the default options used for ballot disposition. The disposition of a ballot depends upon the Election Authority Requirements in your jurisdiction. These options may be overridden by changing the option in the Election Parameter data, while using EMS for Election Coding. The eight default disposition codes of the Optech Insight are listed below:

- Regular Ballot
- Blank Ballot
- Unvoted Major Office Ballot (Option)
- Overvoted Ballot
- Undervoted Ballot
- Write-In Ballot
- Cross-Voted Ballot
- Error Ballot
- Unprocessable Ballot

This appendix also includes a sub-chapter on the following Ballot Disposition:

- Overridden Error Ballot (Option)

C.1 REGULAR BALLOT

Ballot, which has been voted and is not distinguished by any anomaly, such as overvoted offices, damaged, blank, etc.

Regular Ballot is completely tabulated and sent to the Rear Bin. The Public Counter Display is updated to show how many ballots have been sent to the Rear Bin

NOTE: Regular Ballots will cause the Public Counter to be incremented.

C.2 BLANK BALLOT

A ballot on which there are no voting position marks that can be read by the voting system. It may be truly blank in all voting positions, or it may have marks in these positions, which the voting system cannot read because they are of insufficient density.

Blank Ballot is returned to Voter, along with the following “Return to Voter” message:

02:29:38 Warning! Unvoted blank ballot
(If ballot is voted, check that an approved
voting pen was used)

Ballot returned to Voter!

Do ONE of the following, #1 or #2

- #1 Pull the ballot out and then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the “3” key to re-read
the ballot and override this warning.

Based upon Ballot Disposition options, the following choices are available:

- **Try Ballot Again:** If a Voter does not mark their ballot properly by filling in the Voting Arrows, but instead circles the candidate names, the ballot is returned to Voter, and the above message is printed. In this case the ballot can be pulled out and the Voter instructed on the proper manner of marking candidate votes and can even use the same ballot.
- **Issue New Ballot:** If a Voter fills in the Voting Arrows but uses a non-standard Marking Device, the Optech Insight may not be able to read the vote marks and the above “Return to Voter” message will be repeated. In this case the Voter should be issued a new ballot.

The problem ballot is placed in a Spoiled Ballot envelope.

- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** Although very rare, a Voter may choose to cast a ballot with no votes marked. If such a ballot is overridden, the number of ballots cast will be incremented, but no candidate will receive a vote.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

C.3 UNVOTED MAJOR OFFICE BALLOT (OPTION)

A ballot where a designated major office has been left unvoted, or a multiple-vote major office has been undervoted.

Unvoted Major Office Ballot is returned to Voter, along with the following “Return to Voter” message:

02:29:37 Warning! Unvoted major office
Ballot returned to Voter!

Do ONE of the following, #1 or #2

- #1 Pull the ballot out and then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the “3” key to re-read
the ballot and override this warning.

NOTE: If the ballot has an overvoted office in addition to the unvoted “major office,” the ballot will be returned to the Voter, but only the “Overvoted office” message will be printed.

Upon an Operator “override” acceptance of the ballot, the Optech Insight will take the ballot, but will NOT then print an “Unvoted major office” warning message.

Based upon Ballot Disposition options, the following choices are available:

- **Try Ballot Again:** Have the Voter fill in the Voting Arrows for the major office.
- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** Although very rare, a Voter may choose to cast a ballot with no vote marked for the major office. If such a ballot is overridden, the number of ballots cast will be incremented, but no candidate will receive a vote for that major office.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

NOTE: To enable this “Undervote warning,” the following steps MUST be performed in EMS:

1. Select **(01) Creation and Definition**.
2. Select **(08) Change Election Specifications Master**.
3. At **Need special Contest Types**, enter **Y**.
4. Under **3PE Process Options**, set both of the following to **R** (to be returned):
 - **Blank Ballots**
 - **Overvoted Ballots**

IMPORTANT! IN ORDER FOR THE “UNDERVOTE WARNING” TO WORK, BOTH MUST BE SET TO “R.”

5. Save the Election Specifications.

NOTE: To designate a particular contest as a “Major Office,” the following steps MUST be performed in EMS:

1. Under **Change Contest and Candidates**, enter **U** for the **Special Type** field for that contest (office).

C.4 OVERVOTED BALLOT

Ballot, where the Voter has voted for more than the allotted number of candidates for the office being contested.

Overvoted Ballot is returned to Voter, along with the following “Return to Voter” message:

5:51:05 Warning! Unvoted blank ballot
(If ballot is voted, check that an approved
voting pen was used)
Ballot returned to Voter!

Do ONE of the following, #1 or #2
#1 Pull the ballot out and then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the “3” key to re-read
the ballot and override this warning.

For most offices on a ballot, the Voter is allowed to mark only one candidate position per office. If the Voter marks for two or more candidates in such an office, the ballot is returned to Voter and the above “Return to Voter” message is printed.

Based upon Ballot Disposition options, the following choices are available:

- **Issue New Ballot:** If the option to pull the ballot out of the Optech Insight is selected, the Voter can be issued a new ballot and instructed on the proper number of votes allowed per office. Note that the title of the overvoted office is printed as part of this “Return to Voter” message in order to allow the Poll Worker to specifically instruct the Voter in regard to the number of votes allowed for that specific office.

The problem ballot is placed in a Spoiled Ballot envelope.

- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** If the option to override the ballot is selected (while the ballot is still partially inside the Optech Insight), the ballot will be read again and no candidate will receive a vote in the overvoted office, but other offices on the ballot that are correctly voted will be properly counted.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

C.5 UNDERVOTED BALLOT

Ballot, where the Voter has voted for less than the total number of election contests listed on the ballot, or less than the number of positions to be filled for a single office.

Undervoted Ballot is returned to Voter, along with the following “Return to Voter” message:

02:29:37 Warning! Undervoted office
U. S. SENATOR

Ballot returned to Voter!

Do ONE of the following, #1 or #2

#1 Pull the ballot out and then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the “3” key to re-read the ballot and override this warning.

Based upon Ballot Disposition options, the following choices are available:

- **Issue New Ballot:** If the option to pull the ballot out of the Optech Insight is selected, the Voter can be issued a new ballot and instructed on the proper number of votes allowed per office. Note that the title of the overvoted office is printed as part of this “Return to Voter” message in order to allow the Poll Worker to specifically instruct the Voter in regard to the number of votes allowed for that specific office.

The problem ballot is placed in a Spoiled Ballot envelope.

- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** If the option to override the ballot is selected (while the ballot is still partially inside the Optech Insight), the ballot will be read again and no candidate will receive a vote in the overvoted office, but other offices on the ballot that are correctly voted will be properly counted.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

C.6 WRITE-IN BALLOT

A ballot where a vote has been cast in a race for a candidate whose name does not appear on the ballot. Write-In Ballot is tabulated (except for Write-In) and sent to the Center Bin, for review after Closing the Polls.

NOTE: Write-In Ballots will cause the Public Counter to be incremented.

C.7 CROSS-VOTED BALLOT

NOTE: This applies ONLY to states that have Open Primaries.

Ballot with votes for more than one party for an Open Primary election

Cross-Voted Ballot is returned to Voter, along with the following “Return to Voter” message:

02:29:38 Warning! Cross voted ballot

Ballot returned to Voter!

Do ONE of the following, #1 or #2

#1 Pull the ballot out and then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the “3” key to re-read the ballot and override this warning.

This “Return to Voter” message will only occur in those states that have an Open Primary, and indicates that the Voter has attempted to vote in more than one party’s set of Partisan Offices.

Based upon Ballot Disposition options, the following choices are available:

- **Try Ballot Again:** The ballot may be tried again.
- **Issue New Ballot:** A new ballot may be issued to the Voter.
The problem ballot is placed in a Spoiled Ballot envelope.
- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** If overridden, only Non-Partisan Offices on the ballot will be counted.
NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

C.8 ERROR BALLOT

Your election jurisdiction has tested your Optech Insight unit with samples of the actual ballots. However, either ballot printing or ballot trimming problems could have occurred with the batch of ballots in your precinct which could cause ballots to be returned to Voter with error messages. In addition, while the Optech Insight is a very robust “industrial strength” unit, the possibility always exists for an electro-mechanical failure to occur which would cause false ballot error messages to occur.

Error Ballots generate error messages that refer to the following:

- Orientation Bars
- Read-Heads
- Start Bar
- Stop Bar

Possible reasons for Error Ballots are as follows:

- The printing on the ballot is of poor quality.
- The ballot was trimmed incorrectly.
- The Optech Insight Read-Head has failed.
- The ballot has been torn or wrinkled.
- The Voter has made marks in following areas of the ballot:
 - o Orientation Bars
 - o Header Code Bars
 - o Start Bar
 - o Stop Bar
- Greasy fingerprints (e.g., motor grease, etc.) are on the ballot.

Based upon Ballot Disposition options, the following choices are available:

- **Issue New Ballot:** If the option to pull the ballot out of the Optech Insight is selected, the Voter can be issued a new ballot and instructed on the proper number of votes allowed per office. Note that the title of the overvoted office is printed as part of this “Return to Voter” message in order to allow the Poll Worker to specifically instruct the Voter in regard to the number of votes allowed for that specific office.

The problem ballot is placed in a Spoiled Ballot envelope.

- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** If the option to override the ballot is selected (while the ballot is still partially inside the Optech Insight), the ballot will be read again, but not tabulated.

Instead, it is stacked separately from the Regular Ballots so that the ballot can subsequently be reviewed and manually tabulated.

Although not tabulated, Error Ballots that are returned to Voter and overridden cause the Public Counter Display to be incremented.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

Ballot which causes the Optech Insight to determine the ballot as unreadable for the following reason:

- An Open Primary election

Error Ballot is returned to Voter.

It may be overridden, per *appendix C.9: Overridden Error Ballot (Option)*.

C.8.1 ORIENTATION BARS

The following error message indicates an error in verifying the presence of proper Orientation Bars on the ballot.

02:29:38 PM, 11/18/02
Error reading ballot (Orientation Bar detect)
Ballot returned to Voter!

Do One of the following, #1 or #2
#1 Pull the ballot out an then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the “3” key to re-read the ballot and override this warning.

C.8.2 HEADER CODE BARS

The following error message indicates an error in verifying the presence of proper Header Code Bars on the ballot.

C.8.3 START BAR

The following error message indicates an error in verifying the presence of a proper Start Bar on the ballot.

02:29:38 PM, 11/18/02
Error reading ballot (Startbar detect)
Ballot returned to Voter!

Do One of the following, #1 or #2
#1 Pull the ballot out an then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the "3" key to re-read the ballot and override this warning.

C.8.4 STOP BAR

The following error message indicates an error in verifying the presence of a proper Stop Bar on the ballot.

02:29:41 PM, 11/18/02
Error reading ballot (Stopbar detect)
Ballot returned to Voter!

Do One of the following, #1 or #2
#1 Pull the ballot out an then try it again or vote a new ballot, OR
#2 Do NOT pull the ballot out. Instead, press the "3" key to re-read the ballot and override this warning.

C.9 UNPROCESSABLE BALLOT

Ballot which cannot be processed because of invalid Security ID Header Code, etc.

Unprocessable Ballot is returned to the Voter.

Based upon Ballot Disposition options, the following choices are available:

- **Try Ballot Again:** The ballot may be tried again.
- **Issue New Ballot:** A new ballot may be issued to the Voter.
The problem ballot is placed in a Spoiled Ballot envelope.
- **Auxiliary Bin:** Pull the ballot out of the Ballot Slot, and place it in the Auxiliary Bin for review after Closing the Polls.
- **Override Ballot (Option):** It may be overridden, per *appendix C.9: Overridden Error Ballot (Option)*.

NOTE: This option is available ONLY if encoded into the Election Parameter data, by using the EMS election coding system.

C.9.1 INVALID SECURITY ID HEADER CODE

The most common type of unprocessable Ballot is Invalid Security ID Header Code.

In elections of any complexity, there are multiple Ballot Styles that require that ballots of the correct Ballot Style be delivered to each precinct. If the wrong Ballot Style is delivered to a precinct, the Optech Insight in that precinct will return such ballots to Voter and print the following error message:

02:29:38 PM, 11/18/02

Ballot security ID header does not match!

(Header 000-003 invalid for this precinct)

Ballot returned to Voter!

Do One of the following, #1 or #2

#1 Pull the ballot out and then try it again or vote a new ballot, OR

#2 Do NOT pull the ballot out. Instead, press the "3" key to re-read the ballot and override this warning.

In elections of any complexity, there are multiple Ballot Styles that require that ballots of the correct Ballot Style be delivered to each precinct. If the wrong style of ballot is delivered to a precinct, the Optech Insight in that precinct will return such ballots and print a logical ballot error message like the one above. If this happens, call your election headquarters.

The possible reasons for Invalid Security ID Header Code are summarized below:

- The wrong Optech Insight was delivered to the Polling Place.
- The wrong Optech Insight was used if more than one is in use at the Polling Place.
- The wrong ballots were delivered to the Polling Place.
- The Optech Insight Read-Head sensor has failed.
- The printing on the ballot is of poor quality.
- The Voter has made marks in following areas of the ballot:
 - o Orientation Bars
 - o Header Code Bars
 - o Start Bar
 - o Stop Bar
- The ballot has been torn or wrinkled.
- A non-standard Marking Device was used.
- Greasy fingerprints (e.g., motor grease, etc.) are on the ballot.
- The ballot was incorrectly trimmed.

C.9.2 WRONG NUMBER OF ARROWS

This error message can indicate hardware or ballot printing errors but more often occurs in the earliest stages of testing and indicates an error in the Election Parameter data.

02:29:38 PM, 11/18/02

Wrong number of arrows!

Ballot is (2-021), should be (2-020)

Read error or wrong ballot style

Ballot returned to Voter!

Do One of the following, #1 or #2

#1 Pull the ballot out and then try it again or vote a new ballot, OR

#2 Do NOT pull the ballot out. Instead, press the "3" key to re-read the ballot and override this warning.

C.10 OVERRIDDEN ERROR BALLOT (OPTION)

NOTE: This option is available ONLY if encoded into the Election Parameter data, using the EMS election coding system.

Unprocessable or Error Ballot, which is returned to the Voter, and then overridden.

Request to re-read ballot and override warning
5:50:52 Request processed

The following exception ballots may be returned to Voter, and may then be pulled out for review or replacement, or may be overridden using the [3] Override Error Ballot key and processed appropriately and stacked in the appropriate Ballot Bin:

- **Blank Ballot:** It is tabulated, and sent to the Rear Bin with the Regular Ballots.
- **Unvoted Major Office Ballot (option):** Voted offices are counted, and the ballot is sent to the Rear Bin with the Regular Ballots.
- **Overvoted Ballot:** Non-overvoted offices are counted, and the ballot is sent to the Rear Bin with the Regular Ballots.
- **Undervoted Ballot:** Non-undervoted offices are counted, and the ballot is sent to the Rear Bin with the Regular Ballots.
- **Cross-Voted Ballot:** Non-cross-voted offices are counted, and the ballot is sent to the Rear Bin with the Regular Ballots.
- **Error Ballot:** It is Red-Striped, NOT tabulated, and the ballot is sent to the Center Bin for review and disposition after Closing the Polls.
- **Unprocessable Ballot:** It is Red-Striped, NOT tabulated, and the ballot is sent to the Center Bin for review and disposition after Closing the Polls.

NOTE: ONLY the following Overridden Error Ballots will cause the Public Counter to be incremented:

- Blank Ballot
- Unvoted Major Office Ballot (Option)
- Overvoted Ballot
- Undervoted Ballot
- Cross-Voted Ballot

Red-Striping is an option.

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Appendix D: Pre-Election LAT

This appendix defines the Pre-Election LAT, as follows:

- Pre-Conditions
- Performing Pre-Election LAT
- Logic Testing
- Accuracy Testing
- Test Deck Tabulation Results

Complete testing of the voting machines shall be conducted before the use of this equipment in an election. This testing is required for equipment to be used in Polling Places.

Testing of the Optech Insight as set forth in this appendix shall include every unit to be used.

The test procedures described herein are a required MINIMUM and do not preclude additional testing performed at the option of the Election Official.

All tests will be conducted using test materials specified herein in such a manner as to meet these guidelines. All tests shall result in reporting that matches predetermined results. Reports and test materials must be retained as specified in *sub-chapter 2.11: Retention of Test Materials and Results*, herein.

D.1 PRE-CONDITIONS

Prior to Logic and Accuracy tests, the following must be assured:

1. Diagnostic Tests on all equipment shall have been performed, per the *Optech Insight Maintenance Manual*.
2. Test decks of ballots shall have been prepared as specified per *appendix D.5: Test Deck Tabulation Results*.
3. All election parameter data to be used for Accuracy testing shall have been coded using the "Famous Names" election or with a similar fictitious election that will provide compliance with *appendix D.4: Accuracy Testing*.
4. Documentation must be prepared to show the known and expected voting and statistical results, said documentation is to be compared against that produced as a result of the tests.

D.2 PERFORMING PRE-ELECTION LAT

The Pre-Election LAT is a short simulation of an election, using official test ballots (with "known" results). The purpose of the test is to check the accuracy of each Optech Insight being sent to a Polling Place, both the physical unit itself and the logical elements in the MemoryPack. You will do the following:

- Feed a stack of official test ballots through the Optech Insight being tested.
- Then compare the results printed out on the Vote Totals Report tape with the tape of known results included with the test ballots.

The results must be identical.

Note that both of these conditions will be true during Pre-Election LAT.

Please see the *Optech Insight Operators Manual* for the detailed procedure.

D.3 LOGIC TESTING

Logic testing consists of those processes and procedures necessary to ensure that the Ballot Tabulation programs and hardware correctly interpret, summarize and report Voters' marks for a specific election. This is normally a series of tests utilizing test ballots which are made from actual printed ballots, and accumulation of results from individual units.

Successful testing will demonstrate that:

- Each candidate and ballot measure receives the proper predetermined number of votes.
- The system reports the proper number of over and undervotes.
- The system accepts only the proper Ballot Styles and rejects improper ones.
- The system is capable of tabulating the maximum number of ballots possible for a precinct.

Logic tests will be conducted using test materials below in such a manner as to meet these guidelines. All tests shall result in reporting that matches predetermined results. All reports and test materials must be retained as specified in *sub-chapter 1.5: Retention of Test Materials and Results*, herein.

D.3.1 PERFORMANCE OF LOGIC TEST

Pre-Election Night Testing:

An election-specific Logic Test shall be performed on 100% of the units to be used. This Logic Test may begin within 50 days of the election and can be of sufficient duration to assure its adequacy.

Election Night Testing :

Before and following election night Ballot Tabulation, Logic Tests shall be performed.

Post-Election Testing :

For the Official Canvass conduct a Logic Test prior to processing.

Following the Official Canvass, conduct Accuracy Test for 100% of the units.

The predetermined results for balancing of election processing must be available for inspection and sign off per the requirements of the jurisdiction.

The official Logic test must be completed, certified, and received, per the requirements of the jurisdiction. It must accompany official copies of the Ballot Tabulation programs and files.

All Ballot Tabulation program(s) and hardware must remain operative from the time of the pre-ballot processing logic test, through the processing of all voted ballots, to the post-ballot processing logic test. Any condition which requires the Optech Insight to be re-initialized shall require a new set of logic testing and shall require that all ballots and floppy diskettes processed since the last successfully completed logic test be rerun. A power failure normally does not necessitate re-initialization. At the time power is re-applied, the last batch of ballots tabulated will have to be recounted if their totals have not already been added to the backup file.

The logic test ballots shall be tabulated using the Optech Insight. The resulting logic Ballot Tabulation shall be compared in detail with the predetermined logic Ballot Tabulation. Any differences between the two logic Ballot Tabulation shall be resolved, and logic testing shall be performed as many times as may be necessary to achieve a logic Ballot Tabulation which is identical to the predetermined logic Ballot Tabulation. This process shall also be done for any Absentee Test Ballots that are subject to separate logic and accuracy testing. After balancing the two logic Ballot Tabulation, the logic test ballots and the run-time documentation shall be locked in a facility with restricted access or sealed. Logs or records shall be maintained, recording each performance of the logic test and by whom.

D.3.2 PREPARATION OF LOGIC TEST MATERIALS

The responsible Election Official shall cause the following logic test materials to be prepared and tested

D.3.2.1 ALL BALLOT STYLES:

A logic test deck of ballots will be prepared for all Ballot Styles to be used in the election. This logic test deck is composed of Regular Ballots which shall be marked "TEST."

D.3.2.2 LOGIC TEST DATA:

Two identical sets of test ballots shall be created for each Ballot Style used in the election. For purposes of testing, the Election Official may use either the primary or back-up logic test deck, but the backup logic test deck must be subject to the same security provisions as is the primary logic test deck. The logic test ballots shall be distinctively marked "TEST," and shall include the following test ballots, as described in the following paragraphs:

- Regular Test Ballots
- Overvoted Test Ballots
- Un-Voted Test Ballots
- Recall Measure and Candidates Contest Test Ballots

Regular Test Ballots:

A group of test ballots shall be voted. They shall be marked and be of sufficient quantity so that each candidate for every office on the ballot will receive a predetermined number of votes which are different from the number of votes received by any other candidate for the same office. Also, the number of "yes" votes on any ballot measure shall be different from the number of "no" votes. In the case of offices for which the Voter is allowed to vote for more than one candidate, at least one ballot of the group shall be voted with the maximum allowed number of choices.

For purposes of this test, Write-In positions shall be treated as declared candidates.

No office or ballot measure shall be voted in more positions (overvoted) than are allowed for the office or measure.

Overvoted Test Ballots:

One test ballot shall be an Overvoted Test Ballot, on which every contested office and ballot measure has received exactly one more vote than is allowed. Tests for "overvoted" test ballots will comply with the ballot processing regulations presented herein.

Un-Voted Test Ballots:

One No Votes Test Ballot shall not contain any marks other than those needed for precinct or Ballot Style identification. This test should result in undervotes being cast for each contest in every occurrence in the test. Tests for "no votes" test ballots will comply with the ballot processing regulations presented herein.

Recall Measure and Candidates Contest Test Ballots: If Applicable

Recall Offices, conducted in accordance with the Recall Voting rules and laws for the jurisdiction, and which include two official candidates, shall consist of a series of at least fifteen test ballots shall be prepared as follows:

1. Marked "Yes" only
1. Marked "No" only
2. Marked "Yes" and for the first candidate
3. Marked "No" and for the first candidate
4. Marked "Yes" and for the second candidate
5. Marked "No" and for the second candidate
6. Marked "Yes" and for both the first and second candidate
7. Marked "No" and for both the first and second candidate
8. Marked both "Yes" and "No" and for the first candidate
9. Marked both "Yes" and "No" and for the second candidate
10. Marked both "Yes" and "No" and for both first and second candidates
11. Marked both "Yes" and "No" only
12. Marked for first and second candidate only
13. Marked for first candidate only
14. Marked for second candidate only

When the Recall Office has more than two candidates, additional test ballots shall be marked for each additional candidate with a "Yes" vote and a vote for the candidate, in each ballot. The third candidate should get 4 ballots, the fourth should get 5 ballots, etc.

When there is Recall Voting, and only one official candidate, test ballot card sets, numbered 1, 2, 3, 4, 9, 12, and 14 only shall be prepared.

D.3.3 CERTIFICATION OF LOGIC TEST

Logic test requirements apply to all elections; however, submission of the seven-day certification of logic testing to the Secretary of State is required only prior to statewide elections and elections to fill vacancies in the legislature or congress.

D.4 ACCURACY TESTING

Accuracy testing consists of those processes and procedures necessary to ensure hardware to be used in the election is working properly, both as individual units and as a combined system.

Emphasis is placed on verifying that the Optech Insight can read every permissible mark on the ballot, and that individual components as well as the interface between them function as required. These tests shall be run BEFORE Logic Testing in order to assist in isolating problems.

Accuracy tests are an integral part of equipment maintenance and may be run as often as necessary before each election to ensure proper functioning of hardware to be used in the ballot tabulation process.

D.4.1 PERFORMANCE OF ACCURACY TESTS

Accuracy tests shall be performed prior to Logic and Accuracy Certification (including amendments and recertification, if necessary). The accuracy tests may be run more frequently and shall be run after equipment has had maintenance work. Any failure of the equipment to perform as expected shall be corrected before using that equipment for election processing, and any ballots tabulated on equipment which failed shall be recounted.

In the event the Optech Insight fails after official ballot processing has begun, accuracy tests must be successfully run on the (failed) component after it has been repaired, replaced, or adjusted (in a manner deemed sufficient by the responsible Election Official to require retesting for accuracy), provided the component is to be returned to service.

Diagnostic tests of hardware on election night are permitted.

A loss of power is not to be considered a failure for purposes of this paragraph. Upon recovery from a power loss, the last batch of ballots tabulated will have to be recounted if their totals have not already been added to the backup file.

D.4.2 PREPARATION OF ACCURACY TESTS

The responsible Election Official shall cause the accuracy test deck to be prepared and tested. Predetermined results of accuracy test must be available for inspection and sign off per the requirements of the jurisdiction.

D.4.3 REUSABLE ACCURACY TEST DECK

A reusable test deck consisting of 165 pre-printed ballots conforming to a "Famous Names" election is used to test the accuracy of each unit in order to meet the requirements for ANNUAL testing. The test deck specifications and/or the test deck itself is available from the manufacturer of the Optech Insight. A proper test deck consists of ballots of different colored paper stocks with pre-printed ballot information as well as pre-printed vote marks. The ballots are printed on both sides with a Demonstration election. The pre-printed vote marks are printed intentionally thin to represent the minimum specified acceptable line width. A standard test deck's contents are as follows:

Ballot Style	Description	Quantity	Color
F1	1st Position	10	Blue
F2	2nd Position	20	Green
F3	3rd Position	30	Buff
F4	4th Position	40	Canary
F5	5th Position	50	Cherry
F6	Write-In #1	3	White
F7	Write-In #2	3	White
F8	Over Voted	3	White
F9	Error	3	White
F0	Blank	3	White

The deck is made by removing certain ballots from the manufacturer's 169 ballot test deck. Remove each of the four ballots labeled "Straight Party."

The test decks described above for performance of the annual and Pre-Election Accuracy tests may be substituted with other test decks, provided that they meet the specifications for test decks set forth herein and per the rules of the jurisdiction.

D.4.4 ACCURACY TEST REPORT

When the Reusable Test Deck is processed utilizing the Optech Insight it will produce a report showing votes per voting position as shown in *Appendix D.5: Test Deck Tabulation Results*. This test verifies the ability of the Optech Insight to read ballots, correctly process the data and print out the results. Within 40 days before each election, the Reusable Test Deck shall be run at least twice through each unit.

D.5 TEST DECK TABULATION RESULTS

D.5.1 BALLOT FRONT

Straight Party		State Senator 37 th District		Board of Education	
Virginia Party	0	Nightingale	10	Washington	10
Ohio Party	0	Carnegie	20	Einstein	20
California Party	0	Key	30	Edison	30
New York Party	0	Hearst	40	Keller	40
Overvotes	0	Write-In	3	Dewey	50
Undervotes	0	Overvotes	0	Write-In	0
		Undervotes	59	Overvotes	0
				Undervotes	12
President and Vice President		State Legislature 37 th District		Director of Recreation	
Zachary Taylor and Millard Fillmore	10	Anthony	10	Paige	10
Harrison/Steven	20	Eisenhower	20	Grange	10
Arthur/Hendricks	30	Roosevelt	30	Weismuller	20
Roosevelt/Fairbanks	40	Madison	40	Rockne	20
Write-In	3	Write-In	0	Dempsey	30
Overvotes	0	Overvotes	0	Ruth	30
Undervotes	59	Undervotes	62	Zaharias	40
				Write-In	3
				Write-In	3
				Overvotes	0
				Undervotes	158
U.S. Senator		State Treasurer		Director of Entertainment	
Dirksen	10	Vanderbilt	10	Lombard	10
Curtis	20	Getty	20	Jessel	10
Hancock	30	Rockefeller	30	Rose	10
Aldrich	40	Morgan	40	Smith	20
Write-In	0	Write-In	0	Duncan	20
Overvotes	0	Overvotes	0	Ellington	20
Undervotes	62	Undervotes	62	Write-In	0
				Write-In	0
				Write-In	0
				Overvotes	0
				Undervotes	396
U.S. Representative		Associate Justice		Director of Transportation	
Wilson	10	Hand	10	Ford	10
LaFollette	20	Darrow	20	Olds	20
Redfield	30	Marshall	30	Write-In	0
Wadsworth	40	Jay	40	Overvotes	0
Write-In	0	Write-In	0	Undervotes	132
Overvotes	0	Overvotes	0		
Undervotes	62	Undervotes	62		

D.5.2 BALLOT BACK

OFFICES		PROPOSITIONS			
Judge – 2 nd District		1. Closing Polling Places		5. Gold to Treasury	
Douglas	50	YES	50	YES	50
Moore	100	NO	100	NO	100
Warren	0	Overvotes	0	Overvotes	0
Solomon	0	Undervotes	12	Undervotes	12
Write-In	0				
Overvotes	0				
Undervotes	12				
Judge – 3 rd District		2. Federal Reserve Act		6. Mississippi Navigation	
Holmes	50	YES	50	YES	50
Baer	100	NO	100	NO	100
Nation	0	Overvotes	0	Overvotes	0
Taney	0	Undervotes	12	Undervotes	12
Write-In	0				
Overvotes	0				
Undervotes	12				
Judge – 4 th District		3. Waterway – Atlantic/Pacific		7. Abolishing IRS	
McAdoo	50	YES	50	YES	50
Armstrong	100	NO	100	NO	100
Todd	0	Overvotes	0	Overvotes	0
Write-In	0	Undervotes	12	Undervotes	12
Overvotes	0				
Undervotes	12				
Judge – 5 th District		4. Louisiana Territory		8. Presidential Election	
Truth	50	YES	50	YES	50
Moran	100	NO	100	NO	100
Kent	0	Overvotes	0	Overvotes	0
Write-In	0	Undervotes	12	Undervotes	12
Overvotes	0				
Undervotes	12				

Appendix E: Forms

E.1 CERTIFICATION BY LOGIC AND ACCURACY BOARD

State of California)
(City and) County of (name))

We, the undersigned members of the Accuracy and Program Verification Board, having been duly appointed by (name) , the Registrar of Voters/County Clerk of the (City and) County of (name) , for the (name) election to be held on (date) , to verify the logic and accuracy test ballots as required by the Procedures for the use of the (fill in name of system) System, adopted pursuant to the California Elections Code, do hereby certify through the Registrar of Voters/County Clerk to the Secretary of State:

- THAT the pre-vote counting tests, as defined in the above-mentioned procedures, have been performed
- THAT the pre-vote counting test results have been compared with the predetermined correct totals for each office and ballot measure
- THAT the cause of any discrepancy was found and corrected
- THAT the logic and accuracy test programs, the logic and accuracy test ballots, and the logic and accuracy test printed output which were certified as correct by the Accuracy and Program Verification Board were delivered into the custody of the Registrar of Voters/County Clerk

We declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

SIGNATURE of First Board Member

Date

PRINTED Name of First Board Member

SIGNATURE of Second Board Member

Date

PRINTED Name of Second Board Member

SIGNATURE of Third Board Member

Date

PRINTED Name of Third Board Member

(Use as many signature blocks as there are board members)

E.2 CERTIFICATE OF BIENNIAL INSPECTION

State of California)
(City and) County of (name))

I, (name) , Registrar of Voters/County Clerk of the (City and) County of (name) , do hereby certify that in the normal course of Pre-Election hardware maintenance and testing of our voting (or, and vote tabulating) equipment for the forth-coming election on (date), I find that the voting (or, and vote tabulating) equipment used in the (City and) County of (name) is tabulating ballots accurately. This Certificate is issued pursuant to the California Elections Code.

Dated: (date)

Signed: (name and title)

[Seal]